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SCEPTICISM AND THE FOUNDATION OF EPISTEMOLOGY

A Study in the Metalogical Fallacies

BY

LUCIANO FLORIDI



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To Eugenia Milani Floridi (1907-1995)

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PREFACE

*"Preface writing is an occupational disease of authors,
but it must be granted that they have a legitimate excuse.
It is the only opportunity they ever get of pinning their readers
into a corner and telling them exactly what they are trying to do."*
Arthur C. Clarke, *Preface to Reach for Tomorrow*

When I discovered that my first notes for this book dated back almost ten years, I felt rather distressed. That meant that I had written little more than thirty pages a year, and at such a leisurely pace I would have expected a better result. I have since recovered, but not without having realised that the project I had embarked upon was perhaps more ambitious than a fair estimate of my intellectual forces should ever have led me to think I could complete. Over time this book has become an experimental essay, as I have endeavoured to find an adequate approach to the problem of the foundation of the philosophy of knowledge, a reliable method to examine it and a satisfactory solution, and I assume it is only a belated modesty on my part to wonder whether I have succeeded sufficiently in any of these aims.

The approach can easily be explained. Although its subject is the classic problem of the justification of a theory of knowledge, this is not a straightforward work on epistemology. Epistemology investigates the nature, definition and justification of knowledge. The types of ordinary knowledge we experience in our daily intercourse with the world, such as perception, memory, inferential or a priori knowledge, have been a topic of philosophical analysis at least since Plato's time. Still on the side of everyday experience, post-Gettier analytic epistemology has dealt at length with the definition of

knowledge; while the question of the justification of knowledge, whether ordinary or scientific, has largely come under discussion in the debate between foundationalism and coherentism. The nature of scientific knowledge, its methods and growth have been the primary concern of methodological studies. A book dealing with any of the previous topics would have been epistemological in character, and hence fallen within one of the previous philosophical areas. The present work, however, has a different aim and escapes such an initial classification. Epistemological studies and their corresponding subjects are provinces of a single territory. We enter into that territory by addressing the classic philosophical question of what knowledge is. The routes followed by our answers are nowadays shaped precisely by perspectives such as those mentioned above, but once epistemology is re-composed like this, it becomes easy to see that a more fundamental issue underlies the general problem of the nature of knowledge, namely whether and how a sound philosophy of knowledge is possible at all. Can an epistemology be elaborated which does not lapse into logical fallacies? This is the question which requires a detailed investigation, before any step into the territory of knowledge and epistemology can safely be taken. It is the metaepistemological problem that I have addressed in this work.

To place a metatheoretical investigation about the possibility of a theory of knowledge at the outset of any epistemological undertaking is to endorse a particular form of foundationalism. Quite independently of a quest for an architectural arrangement of the classes of instances of knowledge, such a foundationalism holds, with Kant, that there is an order of priority among the *questions* a philosophy of knowledge should address; while it specifies, with Descartes, that *sceptical questions* hold the most important position within such an erotetic structure. This is not to say that scepticism has to be refuted for a theory of knowledge to become possible. As Hume showed quite clearly, there is no need to dissolve sceptical doubts before being able to advance interesting suggestions about the nature of knowledge itself. Besides, scepticism at its best is not a theory, but a conceptual habit which remains irrefutable as long as its doubts

consist of purely logical possibilities. To assume an order of priorities among questions, and to rank sceptical problems at the top of this hierarchy, is to hold the view that whatever the findings of an epistemology may be, they will always presuppose, and hence depend upon, at least a tacit answer to the most radical doubts that can be envisaged about the nature of human knowledge. One of the tasks of this work has been to uncover such presuppositions.

Initially, the book was not meant to be an essay in method, but during the past few years I have lost most of my faith in the fruitfulness of linguistic and conceptual analysis and, as a result, I have struggled to find a better way of dealing with the problems I still consider to be philosophically interesting. So I have wandered from the history of ideas to information technology, from formal logic to the social sciences, and I suppose the book mirrors such methodological explorations to some extent. I wish I could claim that this has led me to some brilliant conclusion about how philosophical research could be pursued nowadays from a fresh start, but it seems that I have only managed to clarify for myself a few thoughts, which I sincerely hope that I will never be able to question again. I shall briefly sketch them here, without even attempting to defend them, in order to explain to the reader just the general context within which the genesis of this book should be placed.

I agree with many of its critics that analytic philosophy has become a scholastic movement. It persists as “normal science”—a sort of logical empiricism without explicit foundations, apart from its classic inheritance—but what its revolutionary impact was meant to achieve is now very much a matter of history. Philosophy should never be reduced to the archaeology or philology of thought, but cannot survive very long as its manicure either. We seem to have had enough of minute analysis and clarification of linguistic or conceptual matters: we need more understanding and interpretation of broader issues, and on a larger scale. In shifting from one set of tasks to the other, perhaps philosophy will be able to stop retreating into the increasingly small corner of its self-sustaining investigations, and hence re-acquire a wider view about what really matters. By its very

nature, logical analysis can hardly be constructive, but a philosophical method cannot consist only of ways of detecting and eliminating errors; it also requires a much more crucial *pars construens*, whereby positive interpretations and explanations may be formulated and defended. "Let other pens dwell on guilt and misery", and "quit such odious subjects"¹ as soon as one can: a more economical attitude should lead us to preserve what is right in other systems of thought, rather than continuing to regret and dissect the mistakes that we believe our predecessors or colleagues have made. In order to re-gain a more positive attitude, and hence to be able "to play gently with ideas",² logical analysis needs to be supported by a historical concern. I am afraid this is the kind of interdisciplinarity which is more often preached than practised, and in trying to join the two approaches in this book I am also aware that I have run the risk of failing in both or being criticised for either. Among the objections I can forecast, the following is probably the most obvious: a combination of logic, history and a constructive attitude may soon lead us to elaborate views of a rather metaphysical nature. I agree, and I would welcome the tendency. We had better remember that no culture can do without a *Weltanschauung*, this being provided by priests, philosophers or gurus of dubious intentions. Analytic philosophy has dared to suppose that its silent withdrawal from the task of providing one, if not its positive defence of the necessity to eliminate every *Weltanschauung*, would eventually put an end to metaphysics *tout court*. We know what the result has been: there is more interpretation and understanding of the world on Sky-TV, than are dreamt of in our present philosophy.

I mentioned above that the book is also an attempt to find a solution to a very old problem. In 1699, Thomas Baker could already complain that

[...] learning is already become so voluminous, that it begins to sink under its own Weight; Books crowd in daily and are heaped upon

¹ Jane Austen, in *Mansfield Park*.

² Oscar Wilde in *De Profundis*.

Books, and by the Multitude of them both distract our Minds, and discourage our Endeavours.³

If after three more centuries of unremitting intellectual production someone still dares to publish one more book on an enduring philosophical debate, he or she is rightly expected to supply more convincing explanation for such a misdemeanour than just a vague reassurance of serious commitment. Novelty, which is so difficult to achieve in a field as long-established as philosophical studies, is still an inescapable requirement. This being the premise, let me try to clarify wherein the originality of the present work lies.

The principal external concern which informs this book is the promotion of a negative anthropology, which I am convinced should replace the intellectualist view of the human mind as being driven by a spontaneous tendency towards the acquisition of knowledge, a view which we have acritically inherited from Greek and a large part of Christian thought. In the end, what I have wished to argue is that human beings have very little, if any, interest in knowledge for its own sake, and hence that its growth is to be seen as the mind's inevitable reaction to a reality of which it cannot bear very much. This, however, is only the external perspective from which the book has been written, and it has remained such, for I thought the best way to introduce the need for a rejection of the *vis cognoscitiva* was to start from the epistemological problems this transformation could help us to solve, moving from bottom-up instead of top-down, as it were. The choice was then between sceptical questions concerning either knowledge or a theory of knowledge. I have explained above why I have thought it better to start from the latter. As a consequence, I have tried to show that the foundationalist issue affects any theory of knowledge, and that the most satisfactory solution is to develop an anti-intellectualist account of the genesis of the process of knowing—i.e. of the reasons leading the mind to enter into an epistemic

³ T. Baker, *Reflections upon Learning, wherein is shown the insufficiency thereof in its several Particulars. In order to evince the Usefulness and Necessity of Revelation* (London, 1699), p. 10.

relationship with being. I shall refrain from making this point any more explicit here because the entire book is a development and specification of just such a proposal. If I have presented my case successfully, the reader will agree with me that our philosophy of knowledge requires a better understanding of the genesis of the epistemic relation between mind and being, and that a negative interpretation, such as the one given in this book, may be adopted because of its fruitfulness as a solution of the metaepistemological problem. If I have failed, then I hope this is not because the reader judges the elaboration of a negative anthropology worthless, but only because he or she considers it insufficient to solve the metaepistemological problem.

I take philosophy as primarily an argumentative practice, but in no chapter have I wilfully pursued the construction of demonstrative chains of arguments. These are dreams which belong to another philosophical age, and I actually suspect that, as long as we can have historically conclusive or logically infallible evidence, we are still outside the philosophical domain. I have tried to be convincing, though, while the *mos geometricus*, which I have adopted in some cases, is meant not to compel agreement but to satisfy the need for clarity and explicitness. Somewhat paradoxically, once it is interpreted as a means of expounding, as plainly as possible, a reasoning whose plausibility the reader can then more easily subject to his or her own critical assessment, the *mos geometricus* is a feature that should weaken a text, rather than make it coercive. Philosophical clarity, however, is a difficult goal to achieve, and even if I have tried to make each chapter as comprehensible as possible, I still fear I may have failed more than once to be absolutely plain. Whether or not I may flatter myself that this is so because, as Waismann once wrote, “[complete] clarity is the last refuge of those who have noth-

ing to say”,⁴ here is the place to ask the reader for an effort in understanding the less obvious passages. Scientific texts do not need such appeals; literary fiction seems to presuppose our direct participation; only philosophy requires critical collaboration. And when the reader encounters my own mistakes and oversights, I hope he or she will remember Byron’s lines

Where frequent beauties strike the reader’s view,
We must not quarrel for a blot or two,
But pardon equally to books and men,
The slips of human nature, and the pen.

The initial bulk of this book originally consisted of a much shorter and somewhat different work, entitled: *The Need for Gnoseology—Hypothesis for the Introduction of a Theory of the Genesis of the Process of Knowing as a Fundamental Branch of the Philosophy of Knowledge*, which I submitted as a thesis for a degree of M.A. by research to the University of Warwick, during the academic year 1988/9. I am still grateful to the examiners Susan Haack and R. Owen Jones for having awarded me an M.Phil. instead. The radical revision of this work took the form of a series of articles, which then represented the basis for a still further revision, leading to this book. Chapter one is a revised version of “‘Objective Knowledge’: the Disappearance and Revaluation of ‘Knowledges’ from John Sergeant to Karl Popper”, *Nouvelles de la République des Lettres* 1 (1994), pp. 97-122. Chapters three and four are revised versions of “The Problem of the Justification of a Theory of Knowledge: (1) Some Historical Metamorphoses”, *Journal for General Philosophy of Science/Zeitschrift für Allgemeine Wissenschaftstheorie* 24 (1993), pp. 205-233 and of “The Problem of the Justification of a Theory of Knowledge: (2) Morphology and Diagnosis”, *Journal for General*

⁴ F. Waismann F., “How I see Philosophy”, originally in *Contemporary British Philosophy* III, ed. by H. D. Lewis (London, 1956), pp. 447-490, and then in *How I see Philosophy*, ed. by R. Harré (London: Macmillan, 1968), p.16.

Philosophy of Science/Zeitschrift für Allgemeine Wissenschaftstheorie 25 (1994), pp. 17-49. Chapter five is partly based upon "Analytic Epistemology and the Nature of Epistemic Justification", *Epistemologia* 18 (1995), pp. 233-268 and "The Problem of the Justification of a Theory of Knowledge", *Rivista di Filosofia* 81 (1991), pp. 319-335. I have forgotten when I stopped using pen and paper to write, but I know that having all my files constantly available on the hard-disk of my computer has often made the practice of cut-and-paste too easy to resist. Some of the spoils come from the following articles: "Scepticism and the Search for Knowledge: a Peirceish Answer to a Kantian Doubt", *Transactions of the C. S. Peirce Society* 30 (1994), pp. 543-573; "*Cupiditas Veri Videndi*: Pierre De Villemandy's Dogmatic vs. Cicero's Sceptical Interpretation of 'Man's Desire to Know'", *British Journal for the History of Philosophy* 3 (1995), pp. 29-56; "The Internet: Which Future for Organised Knowledge—Frankenstein or Pygmalion?", UNESCO Philosophy Forum, Paris 14-17 March 1995, of which various versions were published in *International Journal of Human-Computer Studies* 43 (1995), pp. 261-274; *The Information Society* 9 (1996), pp. 5-16 and *The Electronic Library* 14 (1996), pp. 43-52; "Followers of French Fashions: Neo-Cartesianism and Analytic Epistemology", forthcoming in *Philosophy and Phenomenological Research*; and finally a review of R. J. Fogelin, *Pyrrhonian Reflections on Knowledge and Justification* (Oxford: Oxford U. P., 1994), forthcoming in *The Philosophical Quarterly*. I am grateful to the editors of the various journals for granting me permission to reprint here all the aforementioned texts or sections thereof.

Even if philosophy tends to be a rather individual enterprise, this book, like so many others, has benefited from the kind help, comments and suggestions provided by several people in the course of the research, and I wish to thank here Robert Amico, Norman Armstrong, Michael Ayers, Jonathan Barnes, Bruno Bianco, Alexander Broadie, Marta Fattori, John Gash, Tullio Gregory, Leofranc Hol-

ford-Strevens, R. Owen Jones, Gert König, Eugenio Lecaldano, Michael Mainwaring, Paolo Mancosu, Diego Marconi, Giuseppe Micheli, Mark Mingotti, Richard Popkin, Sir Karl Popper, Giovanni Stelli, Elizabeth Quarmby, Amanda Saville, David Wood, John Yolton, and finally the anonymous referees of my articles. My debt to Susan Haack is too great to be described fully here. Perhaps I may just say that she is the person from whom I have learnt most over the years. Some of the contents of the book were discussed in courses on Epistemology and Metaphysics, Philosophy of Logic, the History of Modern Philosophy and Descartes' *Meditations*, which I taught first at the University of Warwick and then during the past few years in Oxford. On the whole, I consider myself a very fortunate teacher, for I have learnt a lot from my students. Some of them provided me with helpful comments which more than once led me to reshape or sharpen my thoughts. Finally, I am grateful to Theo Joppe both for his patience and understanding and for publishing the book so promptly after my delays.

I wrote this book in a language which is not my mother-tongue. It is my hope that my lack of full familiarity with the medium has made me conceptually more self-conscious and less liable either to slip into superficial, pre-arranged ways of speaking or to fall into rhetorical traps, but I wish to thank here Paul Oldfield, whose careful reading of the final draft and many, excellent suggestions helped me to improve the style and readability of the book a great deal. Any non-idiomatic English that remains in the text is my own fault.

Finally, my acquaintance with Francesca Cappelletti dates back further than my first encounter with philosophy, and I am very grateful to the former for having always endured with tender understanding the rivalry of the latter. If ever I thought that I could have worked harder and better on this book without her, I now know that I was as foolish as the dove who believed it could fly faster if there was no air.

Research on the various stages of this work was made possible by the generous support of many institutions over the years, and I wish to thank here the Accademia dei Lincei, the British Academy, the Fondazione R. U. I, the Istituto Italiano per gli Studi Filosofici and the Italian Research Council (Ministero della Ricerca Scientifica e Tecnologica) for their various scholarships and grants; the University of Turin, for a post-doctoral research fellowship; the Warburg Institute, for a Frances Yates Fellowship; the University of Marburg, for a visiting fellowship; and finally my two colleges in Oxford, Wolfson, for a four-years Junior Research Fellowship and then a seven-year Research Fellowship, and St. Anne's College, for a lectureship which has given me the opportunity to enjoy important feedback from my classes.

Finally, the usual disclaimer. The reader may wish to know that unfortunately none of the former people or institutions is responsible for any of the mistakes I may have made in the following pages.

Oxford, the 14th of March, 1996

CHAPTER ONE
THE OBJECT
ON THE NATURE OF KNOWLEDGES

*Broad generalization is glorious
when it is the inevitable outpressed juice
of painfully matured little details of knowledge.*
Peirce¹

1. Warburgian Microanalysis

The point of view assumed in the present chapter is lexicographic and extensionalist, since a discussion of the nature of “knowledges”, rather than of knowledge, will be provided. A few words may be useful to explain the peculiarity of this approach. As regards the lexicographic perspective, I expect the reader will soon perceive that this option is not so much due to a methodology still widespread in English-speaking universities, one that privileges the study of linguistic forms above other topics in our discipline, but rather the result of a scholarly examination of the development of the English epistemic lexicon, a development which will in turn be relevant to, and I hope interesting for, the introduction of the topic of this study. By understanding the history of “knowledges”—a technical term in fairly common use among English philosophers during the sixteenth and seventeenth centuries—and its disappearance after Locke, I shall be able to introduce a number of conceptual distinctions that will be useful in the following chapters. Behind this approach lies an assumption and a polemic. The former is Warburgian: we might be able to understand an issue better if we concentrate on revealing de-

¹ C. S. Peirce, *Collected Papers of C. S. Peirce*, ed. by A. W. Burks (Cambridge: Harvard U. P., 1931-1958), Vol. II, p. 14.

tails out of which the broad canvas is made. Thus, I would describe this chapter as a piece of micrological analysis. The latter is philosophical: the attention to historical data in general conceals a deep dissatisfaction with contemporary analytic philosophy, whose intentional lack of concern for the past I find almost sacrilegious.

As regards the extensionalist approach, I shall say here only that it consists in a proposal, which I shall defend in a moment, in favour of the reinstatement of the plural of “knowledge” in order to convey the meaning of a plurality of instances of objective knowledge. This is an important concept, that will assume a central role in the following chapter, where I shall sketch a model for epistemology.

Altogether, this chapter strives to provide a gentle introduction to some basic epistemological issues and, as Peirce would remark

no distinction—the reader may assure himself—will here be insisted upon without an adequate motive, even if it be a mistaken one.²

Or at least that is what I hope.

2. Some Linguistic Preliminaries

In the western philosophical tradition, epistemological doctrines have come to be formulated mainly through the lexicons of seven natural languages: Arabic, English, French, German, Greek, Italian and Latin. The lexicon of each of these natural languages contains a class of families of eminently epistemic terms. I say eminently because we may wish to be able to include in each class other words—a doxastic verb, such as “to believe” or an alethic adjective, such as “true”—that can acquire an epistemic value depending on the context. For the sake of simplicity, we may refer to such a lexical area of a natural language as the epistemic lexicon of that language.

Although Fritz Machlup was probably right when he wrote that

philologists, philosophers and sociologists have made much fuss about the “poverty” of the English language relative to other civilised languages³

² *Ibid.*, p. 16.

it remains indisputable that the English epistemic lexicon is more restricted than the other six I have just mentioned, in at least two important respects. In the first place, English lacks lexical articulations similar to those between *scire sapere* and *cognoscere* in Latin, between *γινώσκω*, *εἶδω*, and *ἐπίσταμαι* in Ancient Greek,⁴ between *ilm* and *mārifah* in Arabic,⁵ between *connaitre* and *savoir* in French, between *kennen* and *wissen* in German, or between *conoscere* and *sapere* in Italian. Indeed, the only other Indo-European language which appears to have a similar lexical restriction is Russian, whose lexicon includes only the verb *znat'* for "to know".⁶ In the second place, and here we come to the central topic of this chapter, as far as the most important of the epistemic nouns is concerned, English ordinarily lacks the lexical form "knowledges" and more generally a use of the noun as sortal. Unlike other epistemic nouns such as "belief" or "proposition", "knowledge" syntactically does not have a singular or a plural form, does not take numerals as pre-

³ F. Machlup, *Knowledge: its Creation, Distribution and Economic Significance*, 3 vols. (Princeton, N. J.: Princeton U. P., 1980-4) quotation from vol. I, entitled *Knowledge and Knowledge Production*, p. 29.

⁴ For an interesting analysis of the Greek epistemic lexicon see M. F. Burnyeat, "Aristotle on Understanding Knowledge" in *Aristotle on Science, The "Posterior Analytics"*—*Proceedings of the Eighth Symposium Aristotelicum*, ed. by E. Berti (Padova: Editrice Antenore, 1978). For Plato, see J. Lyons, *Structural Semantics: An Analysis of Part of the Vocabulary of Plato* (Oxford: Clarendon Press, 1963). Interesting suggestions are also contained in F. E. Peters, *Greek Philosophical Terms* (New York: New York U. P., and London: London U. P., 1967).

⁵ For an analysis of the Arabic epistemic lexicon see F. Rosenthal, *Knowledge Triumphant* (Leiden: Brill, 1970) especially Chap. 3, "The Plural of Knowledge".

⁶ Cf. C. D. Buck (ed.) *A Dictionary of Selected Synonyms in the Principal Indo-European Languages* (Chicago and London: The University of Chicago Press, 1949), pp. 1208-10. Note that in so far as the occurrence of epistemic adjectives depends on the presence of epistemic verbs, the shortage of the latter may also influence the family of epistemic adjectives available in English, see for example the distinction between *cognoscitivus* and *cognitivus* in Latin, or that between *conoscitivo* and *cognitivo* in Italian).

fixes—the correct use of a syntactically complex construction of the singular such as “a knowledge” will be disregarded for reasons that I shall make explicit in a few moments—and it is not specifiable by means of determiners such as “each”, “every”, “many”, “few” or “some” (stressed), but only by determiners such as “much”, “an amount”, “little” or “some” (unstressed).⁷ Semantically, “knowledge” resembles a mass noun, and thus it is *cumulative*: it is supposed to be true of any sum of things or matter of which it is true; and *dissective*: it is supposed to be true of any part of anything of which it is true. Finally, while a class noun like “belief” refers to entities conceived as discrete members of a class, “knowledge” as a mass noun seems to refer to entities conceived as continuous.⁸

The use of “knowledge” as a mass-term-only, just sketched, will no doubt be extremely familiar to the reader, but it is proper solely to the epistemic lexicon of contemporary English. According to Sir William Hamilton, there was a time when “knowledges” was commonly considered a grammatically well-formed noun. Hamilton’s remarks deserve close examination.

3. “Knowledges” before Locke

In different ways, Hamilton gives evidence for three meanings of “knowledges”: *res cognitae*, *cognitiones* and *scientiae*. Things known, independently of whether they are known by a single human knowing subject or not—e.g. that water is H₂O, that the female giraffe has a pregnancy that lasts for 14 months, or that if you want to

⁷ For the distinction between the two different uses of the graphically identical quantifiers “some”—as in “some of you have done a good job” and “some furniture should be removed from the office”—see H. Cartwright, “Heraclitus and the Bath Water”, *Philosophical Review* 74 (1965), pp. 466–485.

⁸ Note, however, that precisely because of the ambiguities in its usage discussed later in this chapter, D. Bolinger classifies “knowledge” under the label “non-degree/degree” in his *Degree Words* (The Hague: Mouton, 1972), p. 85.

make a local call from a public telephone in the UK you need either 10p or a telephone card—are all instances of knowledges as *res cognitae*. Dispositional, doxastic states, like my knowing that there is a glass on the table, that such a glass is full of water, that water is a drinkable liquid, and that water is H₂O are four instances of knowledges as *cognitiones*. Physics, chemistry and, in more optimistic times, philosophy itself could provide three examples of knowledges in terms of *sciences*.

The first two meanings appear in Hamilton's edition of *The Works of Thomas Reid*:

[...] the principles of our knowledge must be themselves Knowledges [here Hamilton adds a footnote, see below]. If viewed as cognitions, in general, they have been called 1.a Cognitions or Knowledges (*gnoseis, cognitiones, notitiae, informationes* &c.) with the discriminative attributes *first, primary, ultimate, original, fundamental, elemental, natural, common, pure, transcendental, a priori, native, innate, connate, implanted* &c. [here and below underlining is in the text, whereas the italics are mine].⁹

Note that, by characterising cognitions, knowledges, *cognitiones*, *notitiae* and *informationes* as synonymous, Hamilton mentions, but does not sharply distinguish between, *res cognitae* and *cognitiones*, that is, in the text, between *notitiae/informationes* and *cognitiones*.¹⁰ This is also shown some years later by Hamilton's similar use of "knowledges" in his *Lectures on Metaphysics and Logic*:

Now this knowledge of the cause of a phenomenon is different from, is something more than, the knowledge of that phenomenon simply as a fact; and these two cognitions or knowledges have, accordingly, received different names. The latter, we have seen, is called *historical*, or *empirical* knowledge; the former is called philosophical, or scientific,

⁹ *The Works of Thomas Reid*, ed. by William Hamilton (Edinburgh: Macclachlan, 1846), pp. 763-4.

¹⁰ I doubt that the further family of epistemic terms, viz. "Notions, Conceptions Prenotions" (cf. Hamilton, *The Works of Thomas Reid*, p. 764, note 3) were to be understood as our *cognitiones*, and therefore as opposed to the previous family of epistemic terms whose meaning would be understood as close to that of our *res cognitae*.

or rational knowledge. Historical, is the knowledge that a thing is—philosophical, is the knowledge why or how it is.¹¹

And again, a few lines further on:

To recapitulate what has now been stated:—There are two kinds or degrees of knowledge. The first is the knowledge that a thing is [...] and it is called the knowledge of the fact historical or empirical knowledge. The second is the knowledge why or how a thing is [...] and it is termed the knowledge of the causes, philosophical, scientific, rational knowledge.¹²

According to the previous passages, “knowledges” can stand not only for two or more *res cognitae*, but also, or above all, for two or more kinds or degrees of mental apprehensions or cognitions of *knowables* (*cognoscibilia*).¹³ The distinction between *res cognitae* and *cognitiones* is important and worth maintaining. If two instances of knowledge can be called two knowledges, then it is desirable to be able to distinguish whether we are talking about them in so far as they involve a knower, or in so far as e.g. they are stored in the hard-disk of a personal computer. If we do not draw a clear distinction between *res cognitae* and *cognitiones*, as Hamilton seems not to do, the disappearance of all human beings, for example, would force us to speak of the disappearance of any formulated knowledge, which is somewhat counter-intuitive. Or, to put it in a slightly different way, we would never be able to explain how it is possible for knowledges to be manipulated by someone without this someone also understanding what he or she is manipulating. The Latin terminology can be of some help in maintaining such a distinction, for *cognitio* refers to the act or the capacity of getting to know something or someone, to the

¹¹ W. Hamilton, *Lectures on Metaphysics and Logic*, ed. by H. L. Mansel and J. Veitch, 4 vols. (Edinburgh: Blackwood & Sons, 1859), Vol. I, pp. 57-8.

¹² *Ibid.*, p. 58.

¹³ I borrow the technical term from I. Watts, *Logic or the Right Use of Reason in the Inquiry after Truth*, (London, 1792), p. 75: “It is therefore of great service to the true improvement of the mind to distinguish well between *knowables* and *unknowables* [my emphasis]”.

act of acquiring knowledge, to the possession of knowledge, and only after that to “comprehension”, “notion” or “idea” as the results of such activities or processes. Whereas *res cognitae* are *subjectless* knowledges, *cognitus* being a participle that qualifies whatever is known from experience or proved, ascertained, acknowledged or recognised as known. Unlike knowledges as *cognitiones*, knowledges as *res cognitae* can be introduced by the impersonal clause “it is known that ...”.

The third use of knowledges, as synonymous with sciences, does not occur explicitly in Hamilton’s work, but it is referred to in a footnote to the previous passage, where Hamilton writes:

Knowledges, in common use with Bacon and our English philosophers [...] ought not to be discarded. It is however unnoticed by any English Lexicographer.

In this reference to Bacon, Hamilton must have had in mind *The Twoo Bookes of Francis Bacon of the Proficiencie and Advancement of Learning, divine and humane* published in London by Henrie Tomes in 1606.¹⁴ It is in this English work that Bacon used “knowledge” as a class noun¹⁵ and as a synonym for “scientiae”, either in the strong sense of systematic and consistent bodies of knowledge or in the weaker sense of a cluster of items of knowledge.¹⁶

In order to complete our panoramic view of what Hamilton meant

¹⁴ The work has been reproduced in facsimile (Amsterdam, New York: Da Capo Press, 1970) and constitutes part of the third volume of the classic edition of *The Works of Francis Bacon* by J. Spedding, R. Leslie Ellis and D. D. Heath (London: Longman, first edition 1857-74).

¹⁵ Cf. *The Works of Francis Bacon*, vol. III, where occurrences of “knowledges” can be found on pp. 324, 330, 346, 350, 351, 366, 367, 380, 381, 383, 403, 404, 405, 408, 415, 417, 444 and of “a knowledge” on pp. 405, 408 and 484.

¹⁶ See for example *The Works of Francis Bacon*, vol. III, p. 406: “The mathematics, which are the most abstracted of knowledges”, or p. 356 when he speaks of the organisation of various knowledges. The use of “knowledge” as a class noun is so common that the editors of *The Works* often translated *scientiae* by means of “knowledges”.

by “knowledge” as a class noun, we must now say a few words about the expression “a knowledge”. Many people, including Quine,¹⁷ believe that one criterion for classifying a noun as class or mass is whether the noun in question can be preceded by the indefinite article “a(n)” or similar counting specifiers, like “several”, or “few”. It seems that, if it can, it is a class noun; if it cannot, then the noun in question is mass. Apparently, the adoption of such a syntactical criterion would reinforce Hamilton’s remark about the presence of a modern usage of “knowledge” as a class noun, since philosophical works of the seventeenth and eighteenth centuries testify to the occurrence of “a knowledge”. Isaac Watts, for example, uses it quite frequently in his *Logic*, and we find it adopted by Oliver Goldsmith in his *A Survey of Experimental Philosophy* in order to translate the French *connaissance*.¹⁸ However, it has been convincingly argued that every noun which would normally be considered a mass noun can be given a perfectly clear class-sense provided we add some previous specification.¹⁹ For example, it is grammatically correct to say “mineral water is a kind of water which I do not like to drink”. Such a possibility is ordinarily interpreted as showing the necessity of distinguishing between two views: one that considers nouns themselves as intrinsically class or mass, and another that considers their uses as un/countable. In this context, such a linguistic phenomenon can be interpreted as showing that expressions like “a kind of water” or “a type of knowledge” do not imply that “water” or “knowledge”

¹⁷ Cf. H. C. Bunt, *Mass Terms and Model-theoretic Semantics* (Cambridge: Cambridge U. P., 1985), p. 14, where Bunt presents this possibility (of being preceded by “a(n)”) as being thought to be *typical* of count nouns for example by W. V. O. Quine in *Word and Object* (Cambridge Mass.: MIT Press, 1960).

¹⁸ O. Goldsmith, *A Survey of Experimental Philosophy Considered in Its Present State of Improvement*, 2 vols. (London, 1776). The passage occurs in the Introduction, reprinted in *Collected Works*, ed. by A. Friedman (Oxford: Clarendon Press, 1966) vol. V, pp. 341-8.

¹⁹ F. J. Pelletier, “Non-singular Reference” in F. J. Pelletier, *Mass Terms: Some Philosophical Problems* (Dordrecht: Reidel, 1979), pp. 1-14, see esp. p. 5.

suddenly become class nouns, but rather that we are seeing a use of a specifier such as “a” as a class.²⁰ As a consequence—our logical challenger may argue—Watts’ statements such as “you will be more easily led into a distinct knowledge of things”²¹ or “[i]n order therefore to have a clear and distinct knowledge of things”²² may not yet be taken as convincing examples of uses of “knowledge” as a class noun.²³ Moreover, even occurrences of “a knowledge” no longer amount to conclusive evidence for a use of the noun as class, since they can always be reinterpreted as elliptical expressions standing for longer ones containing a specifier. The use of the counter is such that its semantic value is comparable to expressions like “a kind of” or “a type of”. In other words, the expression “a knowledge” could correspond to an answer to questions concerning the quality of the object in question (the item of knowledge), not its quantity. Another example may be helpful. In Goldsmith’s translation of *A Concise History of Philosophy and Philosophers* written by M. Formey (London 1766) we find the following expression: “A knowledge of nature was equally hidden from them [the fathers of Church] [...]” (p. 172). Now, such an apparent use of “knowledge” as a class noun could still be interpreted as elliptical for “a + [specifier] + knowledge”, as this is implicit in another passage where Goldsmith translates “He [Barbarus] united a skill in mathematics with a profound [that is, a deep kind of] knowledge of Peripatetic Philosophy” (p. 199). The fact that I have found no occurrences of “knowledges” in the text or anywhere in his *Collected Works* supports the hypothesis that Goldsmith was not using “knowledge” as a sortal noun, but as a noun whose implicit specifiers are count. It is possible to concur with our logical

²⁰ H. C. Bunt, *Mass Terms and Model-theoretic Semantics*, p. 10: “[i]n fact, almost any ‘mass noun’ can be used as a count noun with the reading ‘kind of...’ from which Bunt concludes that: ‘nouns *per se* cannot be classified as count or mass’.

²¹ I. Watts, *Logic*, p. 66.

²² *Ibid.*, p. 75.

²³ Cf. also O. Goldsmith: “Nor were the ancients without a great knowledge in this art”, *A Survey of Experimental Philosophy*, vol. I, p. 210.

opponent that syntactical considerations are not sufficient to settle the issue. In agreement with contemporary usage, occurrences of the expression “a knowledge” without a specifier can always be reinterpreted by appealing to the distinction between superficial structure, which would seem to present a use of “knowledge” as a class noun, and a deep structure, which would make explicit the elliptical form of the expression by adding specifiers such as “kind of ...” “a sort of...” “a type of...” etc., and hence make the latter bear the countable value of the expression.

Things appear to be different, however, when we select the occurrence of the plural of the noun as a criterion for deciding whether we are confronted with a use of it as a count noun. In the case of “knowledges”, there are no good reasons to deny that Hamilton was employing “knowledge” as a sortal noun. The use of the numeral “two”, in the second passage from the *Lectures on Metaphysics and Logic* quoted above, could not be more indicative. Only in one case may Hamilton’s use of “knowledges” raise doubts similar to those concerning the elliptical use of “a knowledge”, namely when he speaks of the distinction between “two kinds or degrees of knowledge”. Likewise, when Edmund Bolton speaks of “ingenuous knowledges” or of “heroick knowledges”,²⁴ what is primarily ingenuous or heroic is not a type of knowledge but items of knowledge which therefore belong to a certain kind of knowledge, where “knowledge” is used as a class noun. We do not select a special type of knowledge and then declare that such knowledge is ingenuous, but we perceive knowledge as articulated into cases of knowledge and we declare that some of them, i.e. some knowledges, are ingenuous.

4. The Disappearance of “Knowledges” after Locke

So much for the linguistic analysis of Hamilton’s suggestions. If we

²⁴ T. H. Blackburn, “Edmund Bolton’s *The Cabanet Royal*: A Belated Reply to Sidney’s *Apology for Poetry*”, *Studies in the Renaissance* 14 (1967), pp. 159-171, the two plurals occur on p. 168 and on p. 170 respectively.

now consider Hamilton's premonition of the disappearance of "knowledges", we know that he was perfectly justified in his fears. Although the lexicographers of the Oxford English Dictionary have come to take into account the plural of knowledge,²⁵ the tendency to discard "knowledges" from English has overcome the utility of the word. The OED reports some cases of usage of "knowledges" but only to class them as obsolete.²⁶ At a first sight—especially for a foreigner—such a development is puzzling. Why did English not maintain the lexical distinction between the singular and the plural when the other principal lexicons, through which epistemological issues have come to be formulated, still possess it? While "knowledges" was finally disappearing from the ordinary English lexicon—between the end of the seventeenth century and the beginning of the eighteenth century—intellectuals in Great Britain were commonly in contact with their continental colleagues and their languages. Locke, for example, spent several years abroad. Moreover, the epistemic lexicon of English is still sometimes forced to take into account the foreign lexical distinction. Two examples will be sufficient to establish the point. In *The Philosophy of J. P. Sartre* edited by R. D. Cumming,²⁷ we find that a passage from *Being and Nothingness* is translated thus "[...] a world of knowledges [*connaissances*] and techniques [...]". And David Bostock uses

²⁵ Hamilton's remarkable passage from *The Works of Thomas Reid* is not quoted by the *Oxford English Dictionary* which, on the other hand, reports the passage from Hamilton's *Metaphysics*. It is worth noticing that neither the *Scottish National Dictionary*—ed. by W. Grant (Edinburgh: Scottish National Dictionary Association, 1960)—nor the *Dictionary of the Older Scottish Tongue*—ed. by W. A. Craigie and A. J. Aitken (London: The University of London Press, 1937-90)—have an entry for the plural of knowledge. So it is unlikely that Hamilton's interest in the noun was due to his acquaintance with the Scottish lexicon.

²⁶ The *OED on CD*, version 4.1 (Oxford University Press, 1987) reports 18 quotations containing the plural of knowledge.

²⁷ In *The Philosophy of J. P. Sartre*, ed. by R. D. Cumming (London: Methuen, 1965), p. 279. The passage where the sentence occurs is from *Being and Nothingness*, pp. 553-6.

“knowledges” in his *Plato’s Theaetetus* in order to translate the Greek ἐπίσταμαι with the meaning both of “various branches of knowledge” and that of “different things known”.²⁸ If the use of “knowledges” would have been so practical with respect to foreign languages, why was it lost? The various factors which brought about the disappearance of the plural can be arranged under two headings, one linguistic and the other philosophical.

From an etymological perspective, “knowledge” was destined to be used as a mass-only noun because it was, from the start, already a sortal noun but simply in a weak sense of the expression. The point can be explained better by means of a technical device introduced by Keith Allan. In an article on the nature of class nouns, Allan has suggested that degrees of countability could be assigned to (uses of) nouns “by setting up a test battery of countability environments”.²⁹ Percentage goes from the 0% of countability of “equipment” or “furniture” to the 100% degree of countability of “car”. The percentage is determined by the types of countability environments in which a noun can occur. The higher the percentage, the more frequently a noun can be used as count, being preceded by certain articles, quantifiers and other class determiners. According to such quantification of countability, the development of the use of “knowledge” can be imagined to have proceeded from an already very low level of countability to the present degree, which is virtually³⁰ 0%. A linguistic explanation for this intrinsic disposition of “knowledge” to lose its already low degree of countability could probably be developed along the following lines. Occurrences of “knowledges” and “a

²⁸ David Bostock in *Plato’s Theaetetus* (Oxford: Clarendon Press, 1988) p. 32.

²⁹ Cf. K. Allan “Nouns and countability”, *Language* 56 (1980), pp. 451-567, the quotation is from p. 566. My summary is rather sketchy and I must refer the reader to the article for a proper appreciation of the elegant analysis of the issue provided by Allan.

³⁰ I suppose that Allan would adopt a more precise analysis, given the fact that nowadays it is still considered grammatically correct to use “knowledge” in an expression like “a knowledge”. But we do not need such precision of linguistic analysis in this context.

knowledge” during the sixteenth and seventeenth centuries are much rarer than the use of “knowledge” as a mass noun because “knowledge”, as a noun of action, did not originate from the verb “to know”, with which we associate it nowadays, but was introduced as a transformation from the verb “to knowledge”.³¹ During the thirteenth century “to knowledge” still had the meaning of the action of making a confession (confession, fact of knowing, acquaintance). Hence, “knowledge” had above all the meaning of a process, and as a noun its fundamental sense could more easily convey the idea of a sort of “solidified” action, of a certain state of mind, and hence that of a unique relation to external reality rather than that of the discrete outcomes of such an action, relation, process, or state. One may go as far as to observe that what is important is not the number of actions that one confesses, but the unique fact that one confesses them. Since the action of knowing, like that of confessing, is unique, although its contingent results are many, “knowledge” might have tended to become a mass noun whereby the impression of the holistic unity of the process is favoured rather than the sense of the discrete multiplicity of the effects of such a process. “Information” may have undergone a similar development. In Latin “informatio” is a 100% count noun. During the Middle Ages, “informatio” acquired the technical meaning of “the process whereby external reality modifies the mind conferring its form on it”. The fact that such a process of “informing the mind” is unique probably influenced the use of “information” in English as a 0% count noun. Finally, a further linguistic factor that needs to be taken into consideration is the way we form participles in English. Ordinarily, this does not enable a speaker to formulate plural and singular nouns, as Latin does. Such an indefinite value of “known” contributed to the disappearance of “knowledges” by not impeding it. “Known” does not have a declension, and hence in order to understand whether what is known is one

³¹ Cf. the hypothesis presented in the *Oxford English Dictionary*, vol. X, p. 518, second column, Note. The actual origin of “knowledge” is far from being established.

or more than one item of knowledge, we need longer expressions, like “thing/s that is/are known”. If “known” does not give rise to a class of things known, but can equally refer to one or more items of knowledge, then why should “knowledge” be employed as a class noun? If these conjectures are plausible, then “knowledge” was destined to lose even its already low percentage of countability, having an intrinsic tendency to become a mass-only noun from the start..

The previous considerations become more illuminating once we put them in the context of the history of ideas and consider the diachronic evolution of the epistemic lexicon of English. First, it can be noted that “knowledges” was very often constructed analogously to the Latin expressions. The less Latin was studied by British intellectuals, the less necessary it became to translate Latin terminology into English and the easier it may have become to forget about the plural of “knowledge”. A second aspect to be stressed is that in its diachronic evolution the use of “knowledge” as a count noun as well as a mass noun was countered by the firm acquisition by English of “science” and “cognition” as two 100% count nouns. The Anglicisation of *scientiae* into “sciences” and of *cognitiones* into “cognitions” is to be counted as a further obstacle to the use of “knowledge” as a class noun. If Bacon could still use “knowledges” as a synonym for “sciences”, by the time Locke was writing his *Essay* two out of three of the senses in which it was possible or useful to speak of “knowledges” were already firmly covered by two other nouns, which could be and were more commonly used as count. Where was the need to appeal to the low and uncertain degree of countability of “knowledge” in order to convey meanings better covered by “sciences” and “cognitions” in most cases? The use of “knowledge” could be limited to its original and stronger uncountable value.

It is not by chance that I mentioned Locke as the turning point in the history of the word. Philosophy too had an influential role in the rise and fall of “knowledges”. In the rest of the footnote already quoted above Hamilton wrote:

Knowledges, in common use with Bacon and our English philosophers till after the time of Locke, ought not to be discarded.

Hamilton's comment now elicits three questions: excluding his own failed attempt to restore the plural use of the noun,³²

- is it possible to date the final disappearance of "knowledges" to the beginning of the eighteenth century?
- If it is, is it also possible to recognise in Locke's epistemology the last blow to the already low and undermined degree of countability of "knowledge"? And finally,
- who are these English philosophers with whom "knowledges" was still in common use?

An answer to the latter question will enable me to introduce some conjectures about the former two.

As Hamilton himself suggests elsewhere,³³ John Sergeant was one of those philosophers who used "knowledges" very often. John Sergeant [1622-1707] was a Catholic polemicist educated at Cambridge. His two major philosophical works, *Method to Science* and *Solid Philosophy*³⁴ concern epistemological issues about which he shows very little originality. But though his philosophy of knowledge is merely a personal presentation of well known scholastic doctrines, in the present context he is worth some special attention for two reasons: his use of "knowledges" and his radical criticism of Locke's epistemology. Indeed, even his lack of originality turns out to be something to be appreciated, since by concentrating on his philoso-

³² It might be that the cultural atmosphere of the Scottish school of realism prompted Hamilton's interest in a late scholastic term such as "knowledges". This appears even more plausible if Alexander Broadie is right in reconstructing Reid's anti-representative realism as not radically different from the late scholastic realism of the Scot John Mair, cf. his article "Medieval Notions and the Theory of Ideas", *Proceedings of the Aristotelian Society* 87 (1986/7), pp. 153-167.

³³ Cf. W. Hamilton, *Lectures on Metaphysics and Logic*, p. 57, footnote Beta.

³⁴ J. Sergeant, *Method to Science* (London, 1696) and *Solid Philosophy asserted against the Fancies of the Idealists: or the Method to Science farther illustrated. With Reflexions on Mr. Locke's Essay concerning Human Understanding* (London, 1697). I have found no occurrences of "a knowledge" in these two works.

phy of knowledge we shall have a good grasp of what Scholastic textbooks still taught when Locke was studying in Oxford.

On the one hand, Sergeant employs “knowledges” extensively and frequently—especially in *Solid Philosophy*, where he shows himself radically averse to Locke’s epistemology—in order to formulate his scholastic epistemology. Locke himself appears never to have used “knowledges”, even in the same way that Bacon did, in terms of “sciences”.³⁵ On the other hand, in the history of British philosophy Sergeant’s attack on Locke’s “new way of ideas” represents an interesting episode in the wider phenomenon of the passage from a more medieval and late scholastic conception of knowledge to the modern, post-Cartesian theory of ideas. The two factors give rise to a reasonable conjecture. From a philosophical point of view, the disappearance of “knowledges” is to be interpreted as a secondary lexical effect of the vast conceptual revolution which occurred during the emergence of modern philosophy, a minor fissure in the deep fracture which occurred in the history of thought during the seventeenth century. The task of the following section is to provide the reader with sufficient evidence in favour of such an hypothesis.

5. “Knowledges” in Late Scholastic Philosophy

The bulk of Sergeant’s epistemology³⁶ is expressed in the following

³⁵ There is no occurrence of “knowledges” in the *Essay*, cf. the *Electronic Edition* of John Locke *An Essay concerning Human Understanding*, ed. with a foreword by Peter H. Nidditch (Oxford: Oxford U. P., 1990).

³⁶ The first work to have analysed in detail Sergeant’s criticism of Descartes and Locke was N. C. Bradish, “John Sergeant: a Forgotten Critic of Descartes and Locke”, *Monist* 39 (1929), pp. 571-628. Richard Glauser, “John Sergeant’s Argument against Descartes and the Way of Ideas”, *Monist* 71 (1988), pp. 585-595, criticises Sergeant for having confused the two Cartesian theories of ideas (see below). B. Cooney “John Sergeant’s Criticism of Locke’s Theory of Ideas”, *Modern Schoolman* 50 (1973), pp. 143-58 reconstructs Sergeant’s epistemology as this is expounded in *Solid Philosophy*. For a wider perspective on Sergeant’s epistemology see J. W. Yolton, *Perceptual Acquaintance from Descartes to Reid*, (Oxford: Blackwell,

passage from *Solid Philosophy*:

Hence also we may gain some light on what knowledge is. For it has been demonstrated that our Notions on which all our *knowledges* [my italics] are grounded, and of which they are compounded are the very Natures of the thing known; and, consequently, that our Soul, considered precisely as knowing those Natures, or having them in her, as in their Subject, is, as such, those very Things, which are constituted by those Natures, wherefore, our knowing that those things are, or a such and such (which is Compleate Knowledge) is the having of those things and their Predicates of Existent, or of their being affected such and such Accidents, so in the judging Power as they are in the things without; that is, the things within her must be as the things in Nature are. Wherefore, when the Soul knows any thing in Nature she must be that thing as it is Another thing distinct from her; so that in a word, To know is Esse aliud ut aliud; To be another thing, as it is another.³⁷

The fundamental principle that pervades Sergeant's and, more broadly speaking, all late scholastic epistemology, is the Aristotelian doctrine, expressed in *De Anima*, according to which, during the first stage of the process of knowing, the mind becomes what it knows. In other words

[Sergeant] belongs to that tradition in epistemology which explains knowing in the Aristotelian fashion as an absorption of the form of the objects by the mind. The form constituting the essential features of the object which is known.³⁸

Unfortunately, as Locke remarks in the margin of his own copy of *Solid Philosophy*,³⁹ how a material thing can exist spiritually in the

1984). On Sergeant's *milieu* and late Scholastic philosophy in England see D. Krook, *John Sergeant and His Circle. A Study of Three Seventeenth-Century English Aristotelians*, edited with an introduction by B. C. Southgate (Leiden: Brill, 1993).

³⁷ J. Sergeant, *Solid Philosophy*, p. 42; all the following references are from this work.

³⁸ J. W. Yolton, *John Locke and the Way of Ideas*, (Oxford: Oxford U. P., 1956), p. 109.

³⁹ Locke's copy of *Solid Philosophy*, now in St. John's Library, Cambridge, is full of interesting annotations and comments by Locke himself. On page 59 of Sergeant's book, Locke asks "what is it for a material thing to

mind is far from being clear. And despite the fact that Sergeant seems to be aware of the difficulties that such a principle may encounter,⁴⁰ his attempts to make the principle that “anima intelligendo fit omnia” more understandable are not very persuasive. As regards the nature of the mind, Sergeant is forced to assume a strange physical description of the “seat of knowledge” as “the most tender that can be imaged that the least Effluviiums may affect it”. He goes so far as to specify that it cannot be of a gelatinous nature, because otherwise it would stick to the effluviium irrevocably and we would never be able to change our mind.⁴¹ As regards the nature of reality, the Aristotelian doctrine induces him to adopt and re-elaborate the classic distinction between matter and form. In order to make it possible for the mind to become something other than itself, reality must be interpreted as consisting also of a spiritual or immaterial part, as possessing a noetic component which makes the presence-absence of things in the mind possible. The reader may have noticed in the quotation that Sergeant’s technical term for such a component is “notion”.⁴² As he had already explained

[a] Notion is the very thing itself existing in my understanding [...and ...] Notions must be the very things themselves (as far as they are known) in our Soul.⁴³

exist spiritually?”, and on p. 66 “what is it to be corporeo-spiritual?”. Other similar “sceptical” comments are on p. 76 and 123. On Locke’s *marginalia* see J. W. Yolton “Locke’s Unpublished Marginal Replies to John Sergeant”, *Journal of the History of Ideas* 12 (1951), pp. 528-559.

⁴⁰ Cf. again *Solid Philosophy*, the whole of paragraph 26, and *The Method to Science*, p. 21. Such problems still trouble Neoscholastic accounts of the first stage of the process of knowing, see for example F. Van Steenberghe, *Epistemology*, ed. by L. Moonan (New York: J. F. Wagner Inc., 1970), pp. 101-7.

⁴¹ J. Sergeant, *Solid Philosophy*, p. 67.

⁴² For a reconstruction of the relation between the conception of “notion” and that of “idea” in the passage from a late scholastic philosophy to a modern post-Cartesian epistemology see A. Broadie, “Medieval Notions and the Theory of Ideas”.

⁴³ J. Sergeant, *Solid Philosophy*, p. 27 and 28.

Notions are the epistemic side of things and “knowledges” are their combinations in more complex unities. Sergeant’s epistemology and his realism, as an example of the scholastic approach to the nature of knowledge, is largely dependent on a certain description of reality and it may be considered a metaphysical epistemology. He looks at the nature of knowledge from the point of view of the kind of description of reality that can suit the doctrine that the mind becomes what it knows, and thus from the point of view of an ontological interpretation of what things are and how they affect the mind when they inform it.⁴⁴ His metaphysical concern for the multiplicity of the objects known, and therefore for a multiplicity of notions, or noetic aspects of the things, is evident in what he says about the two perspectives from which it is possible to study the nature of knowledge:

[One is] the act of my knowing power [the other is the] object of that act, which as a kind of Form, actuates and determines the indifferency of my Power, and hence specifies my Act.⁴⁵

Sergeant is very careful in specifying that when he uses the word “notion” he is not talking about the act of knowing, but about

the Object in my mind which informs my Understanding Power, and about which that Power is Employed; in which Objective meaning I perceive Mr. Locke does also generally take the word “idea” (*ibid.*).

It is because of such an ontological interest, because of this emphasis on the multiplicity of the objects as “knowables” informing the mind, that he is led to use the plural of “knowledge” so often. There are as many notions as things known or knowables, hence as many “knowledges” as agglomerates of notions.⁴⁶ Sergeant’s

⁴⁴ “J. S. speaks every where as if Truth and Science had personally appeared to him and by word of mouth actually commissioned him to be their sole defender and propagator”. “I wish he would tell us how he comes to know them [all these things], for I fear in this matter he makes God like unto himself and measures the Divine understanding by his own” are two of Locke’s comments on p. 239 and p. 396 respectively of *Solid Philosophy*.

⁴⁵ J. Sergeant, *Solid Philosophy*, p. 26.

⁴⁶ *Ibid.*, p. 319.

“knowledges” are a middle way between Hamilton’s *cognitiones* and *res cognitae*. They are not completely dependent on the knowing subject like the former, because they represent the actual nature of things as they are in themselves, but they are not completely independent of him either, like the latter, because they require a place in which things can explicate (actuate) their epistemic nature. For Sergeant, things exist as *res* and as *cognoscibilia* at the same time; they are potential notions. Such ambiguity is precisely what makes him think that his position is safer than Locke’s from a sceptical dichotomy between reality as it is in itself and reality as it is known by the knowing subject. As he expresses it:

[...] if I have only the idea, and not the Thing in my Knowledge or Understanding, I can only know the Idea, and not the thing; and, by Consequence, I know nothing without me, or nothing in Nature. [And if this were so] adieu to the Knowledge of Things, or to Philosophy.⁴⁷

Sergeant, like many other of his contemporaries and then Thomas Reid, might have had an imprecise understanding of the Cartesian/Lockean efforts to elaborate the notion of “idea” solely in terms of “resemblance” or “similitude”, disregarding the conception of ideas as what stand, almost semiotically (i.e. in terms of significative, not physical presence), in the mind, for what is in reality. Indeed Locke always seems very surprised by this dualist reading of his theory. For example, when on p. 23 Sergeant says that Locke by the word “idea” means “[...] a Resemblance, Similitude or Image [...]” Locke comments “where?”. Again, on p. 343 Sergeant says: “[...] for he [Locke] expressly says these Complex Ideas are made by the Mind [...]” And Locke’s note attached to “says” states: “Where does he [i.e. Locke himself] say so?”. And on p. 351 Locke writes: “He [Sergeant] argues agt [against] Ideas because they are similitude and yet blames M^r L [Mister Locke]: in many places, for saying they are not similitudes. particularly p. 347”. But the point is that, in so far as Cartesianism and Lockean philosophy were still defending an Aristotelian-scholastic view of the relation between mental contents

⁴⁷ *Ibid.*, p. 30.

and their external references—in terms of *identity* between the reality contained *objectively* in the idea and *formally* in its external object—Sergeant could have no reason to disagree. But the latter saw in Locke what we know was going to be a dominant tendency to abandon such an isomorphic conception, in favour of a more innovative view, also advanced by Descartes, of a purely *representative* interpretation of the relation between knowledge and reality, according to which (clear and distinct) ideas *correctly represent* but are not *immediately identical* with their external objects. It was against the latter that Sergeant objected, as he feared that such a position could only lead to an irrecoverable scepticism, leaving external reality intrinsically unknowable.

Sergeant used “knowledges” to convey the meaning of “things existing in the mind in their noetic/epistemic nature”. For him, human knowledge consisted of notions received by the passive mind, and it was possible to talk of discrete “knowledges” because reality was interpreted as consisting of things that were in themselves already discrete knowables. “Knowledges” were the actualisations, in the human mind, of the intelligibility of each single part of the world. The already feeble degree of countability of the use of “knowledge” presupposed a scholastic epistemology of things/knowables affecting the mind isomorphically. As a consequence, the lexical crystallisation into “knowledges” of a scholastic epistemological doctrine presupposed the ontological stress on the full intelligibility of the external world.

Scholastic philosophy did not withstand the impact of the modern subjectivist approach, whose starting point in England is represented, if not by Locke’s epistemology itself, at least by its most common interpretation à la Reid. That Locke was the turning point seems to be confirmed by several clues. Despite the fact that “knowledges” occurs very often in the *Method to Science*, Locke never adopts the plural noun in his marginal annotations on his own copy but, at the same time, he does not make any comment on what to us seems a rather peculiar use of the word. The best explanation of his behaviour is that Locke was not surprised by the use of the plural of

knowledge, yet he did not take advantage of the possibility of using the term as a count noun because, as he scribbles on p. 382, next to one more occurrence of “knowledges”:

Knowledg [sic] has its bottom only in the perception of the agreement or diversity of any two Ideas and is neither founded nor can be induced to identical Propositions.⁴⁸

D. J. O'Connor has remarked that

Locke uses the words “know” and “knowledge” in an even narrower sense than that of “knowing that”. No form of “knowledge” is worthy of the name for him unless it satisfies at least two conditions: (a) I must be absolutely certain of what I am said to know; (b) I must be *justifiably* certain.⁴⁹

Although O'Connor's interpretation may be too radical—the description of knowledge as justified and certain belief really represents only a contemporary approach—admittedly there is in Locke a more restricted use of “to know” and of “knowledge”, especially if compared to Sergeant's charitable attitude towards the plural of the noun. This can be interpreted as a consequence of the fact that the Cartesian revolution leads philosophers to focus more on whether and, if so, how knowledge is possible, and less on the nature of what is known. What matters now is not so much the input—the knowable things that are the origins of the process of knowing—nor the output—the scientific results to which a correct process of knowing should lead—but above all the nature of the intermediary epistemic process and methods which can produce knowledge out of reality. Detached from the ontological assurance of an intelligible world, the notion of “knowledge” is internalised, coming to denote above all a relation of the knowing subject to his own ideas, or a relation among

⁴⁸ Throughout Locke's comments there are at least a dozen occurrences of “knowledge” without the final “e”.

⁴⁹ D. J. O'Connor, *John Locke* (New York: Dover, 1967), p. 26. O'Connor refers e.g. to Locke's *An Essay Concerning Human Understanding*, ed. by P. H. Nidditch (Oxford: Clarendon Press, 1985, first pub. 1690-1700) Bk. IV Chap. XVI, par. 3, and he is critical of what he considers over-strict requirements.

ideas, and no longer the nature of things as intrinsically knowable, or their effects on the mind. After Descartes and Locke, an investigation into the nature of “knowledge” became hardly conceivable without an investigation into the knowing mind. If there is still a bridge between mind and being after the Cartesian revolution, this no longer consists of “knowledges” as a set of “notions”, but of “ideas”, a perfect count noun. Sergeant seems to be implicitly aware of this shift when he comments that

[...] since Mr. Locke affirms that we know nothing either by Direct or reflex Knowledges, but by having Ideas of it.⁵⁰

The meaning of *res cognitae* implicit in “notions” and therefore in “knowledges” was fading, and that of *res cogitatae* slowly emerging, as already implicit in the new technical term “ideas”. Since the relation with ideas or the process of knowing is unique, and “sciences”, “cognitions” and now “ideas” cover almost the whole semantic area previously covered by “knowledges”, there was going to be no reason left to extend the use of “knowledge” as if it were also a class noun.

There is substantial evidence that Locke’s epistemic lexicon became very influential in subsequent years, and eventually led to an irrevocable modification in the English lexicon. The *Cyclopedia or Universal Dictionary of Arts and Sciences* edited by Ephraim Chambers and first published in London in 1728, *A new and Complete Dictionary of Arts and Sciences comprehending all the Branches of Useful Knowledge*, first published by W. Owen in London 1754 and *The Complete Dictionary of Arts and Sciences* edited by Henry Temple Crocker (London, 1765), to give the most striking examples, all actually report

Mr. Locke’s definition [of] knowledge [as] the perception of the connection and agreement, or disagreement and repugnancy, of our ideas.⁵¹

⁵⁰ J. Sergeant, *Solid Philosophy*, p. 20.

⁵¹ *A new and Complete Dictionary of Arts and Sciences*, vol. II, p. 1838. Among the dictionaries and lexicons listed by Giorgio Tonelli in his *A Short-title List of Subject Dictionaries of the Sixteenth, Seventeenth and*

The English lexicon was going to be Lockean. And even if only involuntarily, Ben Halpern has well represented such a post-Lockean perspective:

[i]n contrast [to “opinion” and “theory”] “knowledge” is not used at all in the plural. Thus, it refers essentially to an isolated (abstract) relationship of a subject and an object, and is never used for plural or alternative relationships of subjects and objects.⁵²

This is how we perceive the meaning of “knowledge” today. While enriching the epistemic lexicon of English with the class noun “idea”, Locke deprived it of the plural of “knowledge”. With a little hyperbole, the disappearance of “knowledges” from English can be linked to the beginning of the modern era of Epistemology as *Philosophia Prima*. The re-establishment of the plural of knowledge now requires a digression.

6. Against Ockham’s Eraser

The value of Ockham’s razor, according to which “entia non sunt multiplicanda praeter necessitatem”,⁵³ can be synthesised by saying that, in metaphysics, unnecessary entities are comfortable but at the same time superfluous, if not deleterious. Paul Ziff has given a linguistic version of the principle by means of his Ockham’s “eraser”, according to which we should not “[...] multiply dictionary entries beyond necessity”⁵⁴. If Ziff’s linguistic translation has to be under-

Eighteenth Centuries as Aids to the History of Ideas (London: The Warburg Institute, University of London, 1971) only *A general Dictionary of the English Language* by Thomas Sheridan (London, 1780) does not report Locke’s definition. Like all the other dictionaries, Sheridan’s lacks any entry for “knowledges”.

⁵² B. Halpern, “‘Myth’ and ‘Ideology’ in Modern Usage”, *History and Theory* 1 (1963), p. 130, note 3.

⁵³ As Peirce specifies, the sentence is by Durand de St. Pourcain, cf. *Collected Papers of C. S. Peirce*, vol. VIII, p. 23, note 6.

⁵⁴ P. Ziff, *Epistemic Analysis* (Dordrecht: Reidel, 1984), p. 121 and footnote 52.

stood as something more than merely a sparkling re-wording of the previous principle, then Ockham's "lexical eraser" would teach us that unnecessary new words could be comfortable but at the same time superfluous, if not deleterious, and this would also apply to "knowledges", to be considered at most a piece of Scholastic jargon. I am inclined to disagree with such a strong interpretation of Ziff's principle.⁵⁵ If Ockham's "eraser" were taken as a proper rule governing our attitude towards the economy of a dictionary, not only would I propose keeping the two issues distinct—as one epistemological and metaphysical and the other linguistic and lexical—but I would also suggest that new words in a language can be comfortable without being superfluous, let alone deleterious. Maybe because language is a siren that can convince man to do what she wants⁵⁶ or perhaps because in the case of lexical entries the cost-benefit ratio is much more appealing, when dictionaries are in question I suggest that we should be reasonably prodigal. Hamilton thought that "knowledges" could be a very useful term. Should we then not re-establish a use of "knowledge" as a count noun, no matter how weakly? Several factors tell against this proposal, so let us consider them in turn. I shall first introduce a requirement for, and then a limitation on acceptance of the proposal.

The requirement concerns the fact that the mere presence of a restriction in a lexicon is not sufficient to justify a revisionist attitude towards it. Since any well established, natural language is semantically omnipotent, the narrowness of the English epistemic lexicon could have no effects apart, perhaps, from the marginal fact that, tendentiously, the basic propositions of an epistemological doctrine may be formulated by means of more words in English than in any of the other six languages listed above. Such a possibility, however, ought not to have further consequences at the theoretical level. If it is improper to think of "knowledge" as a polysemous term that occu-

⁵⁵ In his *Semantic Analysis* (New York: Cornell U. P., 1960), p. 44, Ziff seems to endorse this weak option, in terms of simple linguistic translation.

⁵⁶ J. Locke, *An Essay Concerning Human Understanding*, Bk. III, Chap. X, par. 34, lines 32-5.

pies approximately the same semantic areas covered e.g. by the two Italian words *conoscenza* and *sapere*,⁵⁷ it is nevertheless possible to consider it potentially polysemous. It can occur in different expressions, within which it can then give rise to different meanings that sometimes, in other epistemic lexicons, could already be codified in different, specific nouns or verbs. Moreover, we have seen that a large part of the semantic area covered by “knowledges” is now filled by other ordinarily countable nouns. Finally, one may stress that a restriction in a specific area of the lexicon of a natural language should never be confused with a restriction of the concepts that are expressible by means of that language. Certainly, it may be objected that the extension of an epistemic lexicon could actually have implicit consequences in the development of an epistemological doctrine. The shortage of epistemic nouns and verbs in English represents an interesting lack of ready-made lexical/conceptual distinctions that may have some effects, no matter how marginal, in actually orientating the way in which an epistemologist deals with certain topics. Such effects, however, do not necessarily have to be considered restrictive or negative. It is true, on the one hand, that an epistemologist may rely more or less heavily upon the definition or understanding of key terms for the elaboration of his epistemology, so that he or she may be led to disregard important distinctions that another philosopher, who is working with a richer epistemic lexicon, might perhaps be readier to appreciate. But, on the other hand, it is equally true that a poorer lexicon can always promote efforts in favour of more articulate expression and, at the purely lexical level, it can give rise to a higher degree of linguistic awareness that may lead to a more careful, sharper or modified utilisation of the technical terms already available, or simply prompt a revaluation of obsolete terms. To use Waismann’s colourful analogy, just as a good swimmer is able to swim up-stream, so the philosopher can be supposed to be able to master the unspeakably difficult art of thinking up-speech,

⁵⁷ P. Ziff, *Epistemic Analysis*, Chap. I, especially p. 9.

against the current of linguistic habits.⁵⁸ On the contrary, a richer lexicon can be the cause of “lexical acquiescence”. A good lexicon, where “good” is an evaluation relative to the functional value of a lexicon with respect to some established goal of articulation of thought, can be the enemy of a better lexicon. If we add to these considerations the observation that a semantically less specialised lexicon can be more flexible in terms of the syntactical construction of complex expressions than a more specialised lexicon—whose use certainly bears more restrictions in terms of “grammatically well formed sentences”—it follows that a revisionist attitude towards the actual extension of the English epistemic lexicon cannot be motivated by internal, linguistic reasons, but has to be contextualised within an external, philosophical perspective. We may be inclined to endorse an inertially conservative approach towards the present lexicon if our theory of knowledge is in accordance with, or does not suffer from, for example, the absence of a rigid, lexical distinction between *connaitre* and *savoir* or between several instances of knowledge. Or we may be inclined to endorse a revisionist attitude towards our technical lexicon if epistemological reasons lead us to appreciate or to require certain distinctions that we might want to crystallise lexically. It follows that the reinstatement of “knowledges” requires an external justification in terms of the functions that will be performed by the new use we could make of the old term.

Other factors like cacophony, obscurity and elegance may play an important role in the choice between a conservative and a revisionist attitude towards a lexicon. Read for example what Quine says about Susan Haack’s neologism “foundherentism”:

⁵⁸ F. Waismann, “How I see Philosophy”, originally in *Contemporary British Philosophy* III, ed. by H. D. Lewis (London: 1956), pp. 447-490, and now in *How I see Philosophy*, ed. by R. Harré (London: Macmillan, 1968), see p. 19.

Coined words can be a boon, but I protest that there are limits beyond which a coinage cannot be called a word at all.⁵⁹

A reference to these other factors is useful in order to introduce the Lockean distinction between modifications in the “philosophical” and in the “civil” uses of a lexicon. Also in defence of Haack’s proposal, it can be said that modifications in the former are certainly easier to carry out than modifications in the latter, both because modifications in the “civil” uses of a lexicon have to deal with meanings and uses of words that have their historical roots in the ordinary, linguistic practice of entire populations of speakers, and because modifications in the “philosophical” uses of a lexicon, being more technical and artificial, can sometimes disregard factors like cacophony or elegance more easily. After all, philosophers are famous for their propensity to modify natural languages in order to adapt them to their own uses, and thus take an active role in their evolution.

The notion of the philosopher naively misled by grammar should be replaced by that of the philosopher purposefully trying to mould language to his use.⁶⁰

If we apply these considerations to the proposal for a reinstatement of “knowledges” in the epistemic lexicon of English, we find a limitation in its extension. Not only has the lexical modification to be motivated by the external needs of a theory but, at best, the revaluation of “knowledges” would concern only the limited sphere of philosophical uses of the epistemic lexicon, historical English being too vast a domain to be influenced by a single, theoretical suggestion. So let us now turn back to the possibility of using the plural of knowledge.

⁵⁹ W. V. O. Quine, “Comment on Haack” in *Perspectives on Quine*, ed. by Robert Barrett and Roger Gibson (Oxford: Blackwell, 1990), p. 128.

⁶⁰ J. W. Yolton, *Metaphysical Analysis* (Toronto: University of Toronto Press, 1967), p. 198.

7. *Extensionalism and the Reinstatement of "Knowledges"*

What are the external reasons that urge us to carry out our little lexical reform? I expect the re-introduction of the use of "knowledge" as a count noun could help us to attain a higher degree of clarity in four epistemological sectors. Such positive effects depend, more generally, on the possibility of introducing a purely extensionalist perspective in the philosophy of knowledge. I shall discuss here only two aspects of the issue, those strictly relevant to the next chapter. Owing to the internal order of the book some more technical considerations connected with the issue will have to be left to the next chapter. Likewise, consideration of the impact of the introduction of an extensionalist notion like "knowledges" in our technical vocabulary, both on the so-called standard account of knowledge in terms of justified true belief, and on the interpretation of Popper's "epistemology without a knowing subject", will have to be delayed until the last chapter.

Despite Meno's paradox and some contemporary theories of scientific research, human knowledge can still be seen as very much a matter of gradual accumulation. Generations of human beings capitalise on what has been acquired as knowledge by those who went before, and enrich the bulk of it to the advantage of those who will come after them. This is not a very original picture, but if Aristotle had already elaborated upon it twenty-five centuries ago,⁶¹ the actual turning point in the implementation of this process has to be placed much later, obviously sometime during the three centuries that span the rediscovery of Greek philosophy, the invention of the printed book and then the scientific revolution. The emergence of the human *encyclopaedia*, as the totality of knowledge stored and inherited by generations of human beings through the centuries, came to be governed by the humanistic prescription to the effect that knowledge is to be preserved virtually at any cost. Its rise left an indelible impression on the modern mind. Philosophical investigations from Des-

⁶¹ Aristotle, *Metaphysics*, II [a], 1, 993b, 1-5.

cartes to Hegel show a predominant interest in the extraordinary evolution and growth of the human encyclopaedia in all its various expressions. It is a genetic concern. For centuries, philosophers like Locke, Hume, Kant or Fichte discussed from disparate perspectives the different processes that may be supposed to lead to the production of knowledge. In the background lies the nature of the encyclopaedic universe of knowledge, constantly increasing in accuracy, depth and scope, the new world of ideas that nowadays embraces all our life and makes us speak of the information society. Post-modern philosophy—and I use the adjective only for want of a better label—can be understood as the late philosophy which flourishes *within* the encyclopaedia. Kierkegaard, Nietzsche, and Marx, but also Wittgenstein and the linguistic philosophers reflected upon human deeds and “cramps” that occur inside a world which is more and more human and artificial, semiotic and historical. Knowledge is everywhere, and yet little is said upon its nature as an object, as a piece of reality, as an extended domain. Post-modern philosophy has moved too swiftly from reflecting *upon* the process of knowing—the modern concern with method—to reflecting *within* its result, leaving to information technology the task of providing the ontic medium of the domain,⁶² and to social sciences the attempt to sketch its ontological description. It is in this context that a revaluation of the objective sense of “knowledge” takes place, so that it becomes possible to convey also the meaning of “discrete items of knowledge produced by the process of knowing”. Fritz Machlup, for example, at the beginning of his innovative economic analysis of the universe of knowledge or “knowledge industry”, was led to distinguish between two funda-

⁶² I have advocated the possibility of interpreting IT as the last (although certainly not the ultimate) stage in the auto-regulative process through which Western culture attempts to react to and defend itself against its own growth in “The Internet: Which Future for Organised Knowledge—Frankenstein or Pygmalion?”, UNESCO Philosophy Forum, Paris 14-17 March 1995. Various versions were published in *International Journal of Human-Computer Studies* 43 (1995), pp. 261-274; *The Information Society* 9 (1996), pp. 5-16; *The Electronic Library* 14 (1996), pp. 43-52.

mental senses of “knowledge”: “knowledge” as something we may possess, of which there can be stocks and flows, or that can be produced, developed, stored, distributed, increased, decreased and so forth—as when we speak of having acquired “much knowledge”—and “knowledge” as a state of knowing, as when we speak of “having knowledge” of this or that.⁶³ Obviously, the possibility of manipulating members of classes of instances of knowledge by means of set-theory and quantifiers does urge us to adopt a noun that has both singular and plural. And if John Yolton is right in believing that

the role of any of the special languages is to alter the usual meaning of words so as to catch significances otherwise passed over,⁶⁴

then this is indeed a clear case in which our theoretical framework requires a modification in our epistemic lexicon, so that the noun “knowledge” may take into account the conceptual distinction between the process and the product, and between one or more items of the same production. Not only would such an innovation allow us to draw a clear distinction among “knowledge/s”, it would also stress that what is being discussed is the extensionalist concept of knowledge, i.e. knowledge as the formulated, final product of previous epistemic activities.⁶⁵ A countable use of “knowledge” seems precisely what is useful here in order to convey the meaning of “discrete items of knowledge produced by the process of knowing”, and to balance ourselves between a modern concern for knowing and a post-modern concern for what happens within knowledge. By focus-

⁶³ F. Machlup, *Knowledge and Knowledge Production*, pp. 27-8.

⁶⁴ J. W. Yolton, *Metaphysical Analysis*, p. 198.

⁶⁵ “Sciences” and “cognitions” have come to replace “knowledges”, but it is also clear that the meaning of “knowledges” as *res cognitae*, that is as the actualisations of knowables, is only partially covered by the term “ideas”. In fact, the latter bears too subjective a value to be adopted as a synonym for “what is known” or “things known”. We shall see in the last chapter that the noun “information” has also been proposed to refer to the objective outcome of the process of knowing. But, apart from other problems, “information” would obviously run into the same difficulties as “knowledge” in relation to its countability.

ing our attention on the objective meaning of knowledges we shall be able to base our investigation upon the new domain of knowledge, and assume the human encyclopaedia as the starting point for any further inquiry. This is what we shall see in the following chapter.⁶⁶

⁶⁶ The reader who finds my lexical reform counter-intuitive and would prefer to speak in terms of “epistemic propositions” should also be aware that some formulations of knowledge may adopt very peculiar languages—consider for example a flow chart, or the symbolic representation of chess-moves—that would render such a device rather difficult to employ.

CHAPTER TWO

THE THEORY OF THE OBJECT

ON THE NATURE OF EPISTEMOLOGY

*It is the office [...] of reason, to bring a unity
into all our conceptions and several knowledges
S. T. Coleridge, Aids to Reflection*

1. From Mereology to Set-theory

The outcome of the previous explorations into the linguistic nature of “knowledges” has been the recognition of a change, at the beginning of modern philosophy, from a more extensional to a more intentional understanding of the epistemic notion in question. External reasons have suggested that there is room for a strategic re-acquisition of an extensional perspective. It would help us to clarify our ideas on the topic if we could consider knowledges as entities or elements of a set, items of the human encyclopaedia that we have inherited from the past and shall bequeath to the future. A direct consequence of the reinstatement of “knowledge” as a count noun is its exclusion from the list of terms requiring a special logic of the part-whole relation. It has been suggested by Harry Bunt that

since a mass term does not individuate its reference, it would seem that we should not use sets in the same way in formalizing the denotating of a mass term. Indeed, it seems intuitively wrong to ask what members constitute the sets that mass terms like [...] [knowledge, my *addendum*] refer to. Many authors on mass terms therefore believe that we need something other than sets in a formal description of mass terms semantics [...]. Several special formalisms and variants of Lesniewski’s mereology (also known as “calculus of individuals”) have been sug-

gested. However abandoning the framework of set theory leads to often underestimated technical problems [...].¹

Mereology, originally developed by Lesniewski in 1929, and the calculus of individuals, a reformulation of mereology by Leonard and Goodman in 1940, are logics of part-whole, no longer of member-class. In order to manipulate mass nouns, instead of classes we have “mereological wholes” formed by parts. “Water” as a mereological whole can be used to formalise the intuitive notion of “the totality of water” or interpreted as comprising the “sum” or “fusion” of all the parts of water. The re-instatement of knowledge as a count noun would render its mereological interpretation pointless. We could simply adopt the standard framework of set-theory and quantify over instances of knowledge, in terms of “one knowledge”, “two knowledges” etc., as we do with “belief”. As a further consequence, the case of “knowledge” may lead us to think that what is true of this noun may be true of most of the other words in English that seem to require a mereological calculus. Of course, we may be interested in the logic of the part-whole relation in itself, and indeed David Lewis has recently argued in favour of a mereological interpretation of some central notions in set-theory,² but what would happen to the linguistic importance of mereology if we could give the same reconstruction provided for “knowledge” for the countable use of “water”, “luggage”, “rice”, “music”, “gold”, “wood”, “silver”, “air”, “leisure”, “traffic”, “justice”, “safety”, “constancy”, “furniture”, “fruit”, “footwear”, “information” and so on? It is interesting to note that all the Italian translations of such nouns, for example, admit of a countable use. Does this mean that mereology is due to the special nature of English or that

¹ H. C. Bunt, *Mass Terms and Model-theoretic Semantics* (Cambridge: Cambridge U. P., 1985), p. 5.

² D. Lewis, *Parts of Classes* (Oxford: Blackwell, 1991).

the genius of [the Italian] language is abstract, romantic, imprecise and enormously seductive [and therefore that we should] live in Italian by all means, but do philosophy in English³?

I shall leave the answer to the taste of the reader. Enough has been said on the re-introduction of the plural of knowledge, and since the discussion of the proposal has led us to discuss the nature of our object from a more theoretical point of view, it is now opportune to move to the description of the philosophical discipline which has knowledge as its subject of research. Having reasoned upon the object, we are now led to reflect upon the theory that deals with it. Through this process of ascending, we shall gain some further familiarity with the remaining facts that are essential in order to appreciate the foundationalist problem.

As before, a brief outline of the chapter will be useful. By availing ourselves of the use of the technical term “knowledges”, it becomes easier to introduce and clarify the basic distinction between *expressions* and *studies* of knowledge. The next task will be that of expounding those main features of epistemology—here understood as an original, philosophical study of the nature of knowledge—that will be needed in the following chapters. To this end, we shall also take into consideration some relations between epistemology and other cognitive sciences, still on the basis of the distinctions introduced in the previous pages. The last section represents a bridge to the next chapter.

Before entering into a rather intricate series of conceptual clarifications, we should make four points explicit from the outset. They will serve to put the contents of this chapter into the right shape.

1) I wish to acknowledge that I shall allow myself to speak rather schematically and in a fairly selective way about a topic—the theoretical status of epistemology—which in other contexts would no doubt deserve far more ample investigation. Part of what I am going to say will be discussed further in the last chapter, when Quine’s proposal for a naturalised epistemology is taken into consideration,

³ P. Ziff, *Epistemic Analysis* (Dordrecht: Reidel, 1984), p. 76, note 32.

but in spite of this I am still well aware of the preparatory nature of this chapter, which must be read not as standing by itself but with an eye to the final task of this study.

2) It is worth emphasising that the perspective here adopted is no longer scholarly but analytical—I trust the reader will soon perceive what I mean—though the extensional approach of the previous chapter is retained. Such a perspective is loosely connected to Roderick Chisholm's distinction between "particularist" and "methodist" approaches to the solution of the *diallelus*, but to enlarge the discussion to such a topic here would be to anticipate, for we shall encounter this and other cognate questions in the next two chapters.

3) It is important to make explicit the fact that, in what follows, any theoretical study of knowledge itself will be considered as an instance of formulated knowledge, that is as a formulated instance of knowledge about formulated knowledge. This means that I will take seriously the suggestion that a theory about knowledge is a complex instance of knowledge of knowledge.

4) Finally, I would like to spell out the fact that the knowledges I am talking about are to be understood as standing simply for all such phenomena that we call phenomena of knowledge. At this stage of our enquiry, I do not and cannot presume that we already have a clear conception of what are genuine instances of real knowledge. In fact, in this chapter I shall entirely disregard the problem of whether anything that we usually call knowledge is actually real knowledge or not (for example whether it is describable in terms of a reliable representation of the intrinsic nature of reality). In other words, I shall not be concerned with the relation between apparent instances of knowledge and the real nature of what such knowledges are meant to describe—if I may speak in such visual terms—or even with the question whether there is any relation at all between the encyclopaedic universe of knowledges and its domain of knowable topics. I mean to take for granted only that there are certain intellectual contents that we call instances of knowledge, and refer to as knowledges. The determination of their nature is precisely what would be at stake if we were to develop a philosophy of knowledge, and thus it

is a theoretical question that is not going to be addressed in this chapter.

2. *Knowing and Knowledges*

Like many other nouns of action, “knowledge” can have two fundamental meanings. It can be used to refer either to the *state* in which a human knowing subject is, or to the objective *result* of a previous *process* or *activity* of *knowing*. Let us disregard the case in which “knowledge” means the former. We may consider the latter either as a description of the way in which objective knowledge is stored and active in a mind or, which is the same, as the side-effect of the process of knowing. Let us then describe the relationship between knowing and extensional knowledge by interpreting the two terms as referring respectively to the *epistemic*⁴ *process* or *activity* and to the *epistemic outcome* or *product* of such an epistemic process or activity. If in the history of human knowledge the process of knowing (P-knowing) can generally be reduced to an epistemic relation ($\mathfrak{R}$) between a Subject (S) and an Object (O) of knowledge, that is:

- D_1) process of knowing =_{def.} *P-knowing* =_{def.} ($\mathfrak{R}$ (S, O));
- then as a first approximation we can say that:
- F_1) the process of knowing, as an epistemic relation ($\mathfrak{R}$) between Subject (S) and Object (O), produces a certain output called knowledge (K).

⁴ As the adjective relative to the noun “knowledge” I shall use “epistemic” instead of “cognitive”, first because there is not another corresponding noun for “epistemic” (“episteme” is too odd in contemporary English), while there is the noun “cognition” for “cognitive”, and secondly, because the couple “cognition/cognitive” are frequently used in psychology to refer to the activities of a human being, a meaning which would be rather misleading in this context. It is important to note that “epistemic” must be distinguished from the metalogical term “epistemological”. This is a specification whose significance may easily be overlooked, cf. for example W. P. Alston, “Epistemic Circularity”, *Philosophy and Phenomenological Research* 47 (1986), pp. 1-30, who does not distinguish between epistemic and epistemological circularity.

That is:

- F_2 ($\mathfrak{R}$ (S, O)) produces K;

In the last chapter we saw that a suitable way to refer to the extensional concept of knowledge as the outcome of the process of knowing is by using the noun as class or sortal. Accordingly, the extensional meaning of knowledge can now be summarised as follows:

- D_2) *knowledges* =_{def.} whatever is known in the sense of
 - i) things known, regardless of whether they are known by a specific subject or not, i.e. *res cognita* or simply items of knowledge that can be introduced by the clause “it is known that ...”
 - ii) individual cognitions, that is formulated items of individual knowledge that can be introduced by the clause “[name/pronoun] know[s] that ...”
 - iii) sciences, that is consistent bodies of (i) and/or of (ii)
 - iv) any (finite/infinite) disjunction of (i)/(iii).

This first characterisation calls for at least one further refinement. Henceforth, whenever I speak of knowledges I shall be referring only to *possibly objective* knowledges. This specification is not intended to impart any realistic sense to the original expression, as if by objective knowledges one meant instances of knowledge which really describe the exact nature of their object, independently of any interference from the knowing subject. Objective knowledges are not even intended platonistically, i.e. as meaning instances of knowledge which are totally independent of the presence of the knowing subject S. Rather, objective knowledges are to be understood weakly, as meaning *inter-subjective* knowledge in terms of not-necessarily-personal knowledge, that is instances of knowledge which in principle could be shared by any human subject. This is a way of drawing a limit to the domain of knowledge which we shall take into account. An ineffable intuition, for example, will be considered not only an instance of individual, e.g. my, knowledge but also of purely personal knowledge, that is knowledge which is only mine. The “possibly” qualification is there to specify precisely that it is not necessary that a certain knowledge, like an implicit instance of knowledge, should in fact already be inter-subjective in order to

count as an actual objective knowledge. Unless otherwise stated, in what follows I shall drop this “possibly” clause but, whenever I use “objective”, it must also be understood to mean “that in principle could be rendered inter-subjective”.

At this point, given that:

- D₃) instances of (possibly) objective, formulated knowledge =_{def.} *knowledges*;

on the basis of the following equation:

- D₄) the outcome of the process of knowing =_{def.} knowledge as a result =_{def.} *knowledges*;

we can re-write F₂ thus:

- F₃) ($\Re$ (S, O)) produces the class of knowledges.

The following observations may be read as concerning the nature first of the class of knowledges—by discussing what O and S can be from a logical point of view—and then of the whole process of knowing.

3. Expressions vs. Studies of Knowledge

F₃ allows us to speak of all the instances of human knowledge {K₁, K₂, ... K_n} as members of a finite class of countable instances of knowledge (Σ). The sum of all instances of knowledge K₁ + K₂ + ... K_n, that is

$$\sum_{i=1}^n K_i$$

represents the entire universe of knowledges, that is the finite, global encyclopaedia Σ of all Ks, which is stored to a certain degree in human minds, largely in books and other non-electronic media, and increasingly in digital devices forming the intellectual space to which we are entrusting what is perhaps our greatest treasure. Within the global encyclopaedia, knowledges can be grouped in many different ways. According to a typological analysis, relevant for our present purposes, we may opt to focus either on:

- the possible nature of *types* of knowledges;
- the nature of the *topic* concerned by such knowledges; or

- the nature of the subject who is responsible for the coming-to-be of such knowledges (this third criterion cuts across the other two, as we are going to see later, when I shall also explain the different ways in which we can interpret the expression “human knowing subject”).

A further criterion could be the way in which knowledges have been obtained. The latter, however, would probably require reference to the genesis of the process of knowing. Since we are working at the moment on the assumption that a philosophical theory of knowledge is a theory of objective knowledge i.e. of the set of knowledges, it is still undetermined whether such a theory should also concern such an analysis of the process of knowing, and it is more reliable to ground our starting distinctions only on extensionalist criteria, which can be derived from the nature of knowledges alone. This is a restriction that will also apply below to the property of epistemology as an a priori investigation of human knowledge.

As far as the first criterion is concerned, it may be worth noting that it is the source of one of the most familiar classifications of Σ -members, namely of the threefold distinction into

- i) instances of knowledge that,
- ii) instances of knowledge how and
- iii) instances of knowledge by acquaintance.

In this context, however, such a perspective can be set aside, since I am more interested in the distinctions resulting from the application of the second and third criteria.⁵

Depending on the nature of the topic on which a subject is supposed to exercise his/her cognitive capacities, we may want to distinguish, like Plato and Aristotle, between knowledges of what has an immutable ontological nature and knowledges of what has a contingent nature or, like GianBattista Vico, between knowledges con-

⁵ This option does not have any important consequences for the discussion, since the conclusions of this chapter are applicable to any other kind of organisation of knowledge into types of knowledge, such as that between *practical* knowledge and *theoretical* knowledge, for example, which requires a reference to the process of knowing.

cerning Nature and knowledges concerning History. In the same way, one of the most significant differences between contemporary approaches to the theory of knowledge and the writings of modern authors like Locke or Kant is that today we speak in terms of knowledge that p , where p is a propositional letter standing for a specific declarative sentence, whereas modern philosophers spoke of knowledge of p , where p stood for something, and that "something" was a non-linguistic instance of reality. None of these distinctions, however, will be employed here. Rather, for the purposes of our present enquiry we shall focus on (ii), and interpret it in such a way as to organise all Σ -members into the following two sub-classes:

- 1) knowledges concerning a topic different from knowledges themselves; and
- 2) knowledges concerning knowledges.⁶

In order to make this distinction easier to handle, let me introduce two further definitions. We may agree to adopt the following two equations:

- D_5) knowledges concerning a topic different from knowledges =_{def.} expressions of knowledges =_{def.} *K-expressions*; and
- D_6) knowledges concerning knowledges =_{def.} studies of knowledges =_{def.} *K-studies*.

I shall turn to the former classification in the next section, since both definitions require some further refinements. At the moment, the reader may already have noticed that the distinction between types of

⁶ It is also doubtful whether the second occurrence of "knowledge" in (2) should always necessarily be "objective". For it may be argued that psychology, and *a fortiori* psychoanalysis, for example, also seem to consist of objective knowledges about knowledges which are *prima facie* ineffable. Here, however, I have settled the issue in favour of a positive answer, by relying largely on the "possibly objective" clause introduced before. From this perspective, psychology and psychoanalysis have theoretical value only in so far as they succeed in transforming *prima facie* ineffable knowledges into inter-subjective knowledges, and therefore only in so far as the former are liable to an "inter-subjectivation". The Socratic maieutic, for example, would amount to a verbal therapy for the inter-subjectivation of *prima facie* instances of personal knowledge.

knowable objects in terms of the exhaustive dichotomy “knowledge/not knowledge” gives rise to a hierarchy with a first level composed by K-expressions, and a second level constituted by K-studies.

Having established what the nature of O is, we can turn to the application of the third criterion and analyse the logical nature of the knowing subject in question. Both the sub-class of Σ consisting of K-expressions and the sub-class of Σ consisting of K-studies may be further characterised according to the interpretation of the particular type of human knowing subject S that is supposed to be the possessor or elaborator of such objective knowledges. For K-expressions and K-studies can be grouped depending on whether their existence depends originally on

- one or more historically determined human knowing subjects S (historical subject),
- one or more arbitrarily chosen S (arbitrary subject), or
- one or more abstract S (abstract subject).

For the sake of simplicity we can disregard any combined case. When S is a historical subject, this means that we are also taking into account all the possible epistemic idiosyncrasies of the specific knower. In this case, it will be convenient to speak of *subjective* K-expressions and *subjective* K-studies. When S is interpreted as an arbitrarily chosen knower, then we are allowed to disregard such subjective idiosyncrasies. The introduction of the possibility of interpreting S also as an abstract subject provides a further, historical restraint on the nature of the knowledges in question. It means that for any single knowledge K, identified as such at time t_x (for $x > 1$), it is always possible to presume the presence of one or more abstract S, for example a scientist, or a scientific community, that is or are responsible for the elaboration of such a knowledge at time $t_{x,y}$ (for $x > y$ and $y \geq 1$).⁷ Given these distinctions, for the sake of simplicity I shall also confine myself to speaking of each knowledge K as if its

⁷ The ontological status of such an abstract subject could be compared to the nature of “abstract person” in Law.

existence depended always on a single *S*. When the knower *S* is either an arbitrarily chosen or an abstract subject, I shall refer to him as *S*. When we consider *K*-expressions or *K*-studies insofar as *S* is concerned, then we are concerned with *public* *K*-expressions and *public* *K*-studies, as opposed to subjective *K*-expressions and to subjective *K*-studies. Since, in such cases, we are entitled to say that we are speaking of *K*-expressions or *K*-studies as not being affected by the nature of the specific human knowing subject who may actually possess or have elaborated them, I suggest we adopt the following definition:

- D_7) *K*-expressions or *K*-studies depending on $S =_{\text{def.}}$ *K*-expressions or *K*-studies in themselves.

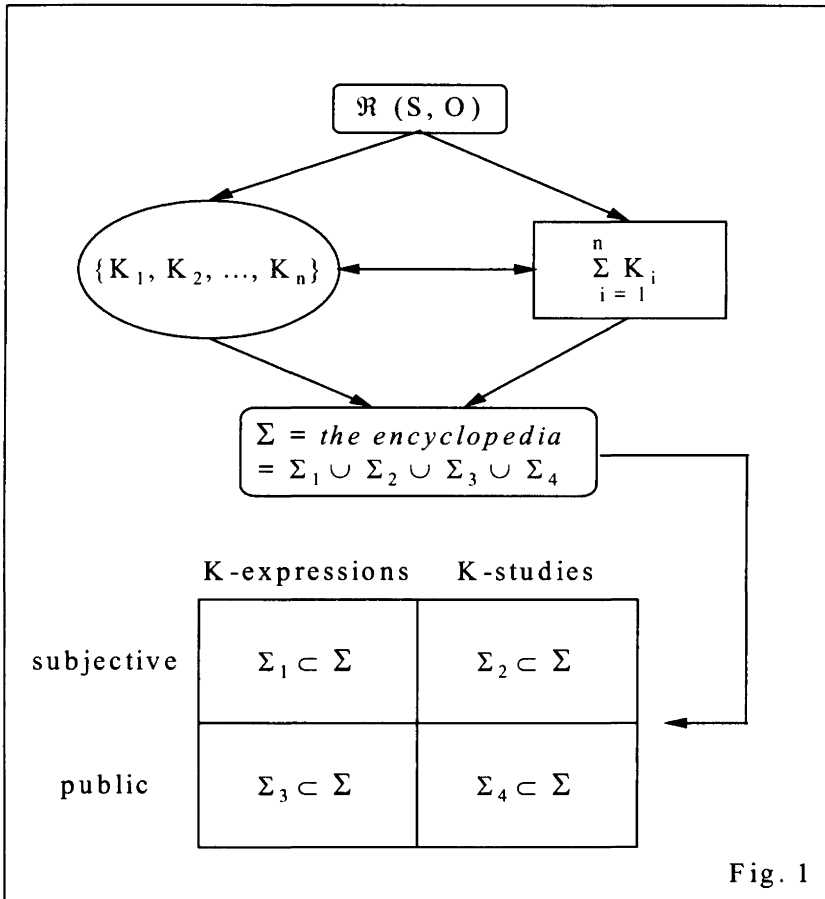
The expression “in themselves” is opposed to “depending on the particular nature of the human knowing subject in question” and it refers to “expressions” and to “studies”. When we are investigating *K*-expressions or *K*-studies in themselves, we can also say that we are dealing with objective knowledge in itself. Obviously, this does not bring with it any policy of de-subjectivation of knowledge, but only a process of abstraction from the various effects due to the specific nature of a particular human subject.

To summarise: Σ is the class of all knowledges and represents the global encyclopaedia of human knowledge. Knowledges concern some topic which is either equal to or different from knowledge itself. I have defined the former as *K*-studies, or knowledges of knowledges, and the latter as *K*-expressions, or simple knowledges. Both *K*-expressions and *K*-studies can be further characterised as subjective or public. Subjective *K*-expressions and *K*-studies represent knowledges as they are possessed or elaborated by an historical knower, with all his possible limitations and idiosyncrasies. Public *K*-expressions and *K*-studies are labels which refer to knowledges that can be possessed/elaborated by any arbitrarily chosen or abstract human knowing subject *S*. These are knowledges in themselves. At this point, the whole set of knowledges Σ turns out to be organised into four proper subsets (see fig. 1):

- Σ_1 , consisting of all the subjective *K*-expressions;

- Σ_2 , consisting of all the subjective K-studies;
- Σ_3 , consisting of all the public K-expressions; and
- Σ_4 , consisting of all the public K-studies.

In the following sections, I shall resort to this taxonomy in order to elucidate the nature of epistemology in relation to other cognitive sciences. Before that, however, we need to refine D_5 and D_6 . Subsequently, I shall be able to specify more in detail the nature of the contents of the class of all the K-expressions in themselves, i.e. Σ_3 , and adapt to the class of all the subjective K-expressions, i.e. to Σ_1 , the conclusions reached for Σ_3 . I shall turn to the nature of the members of the K-studies in themselves, i.e. Σ_4 , in the next section. So that we make speedy progress towards our goal, attention will be restricted to only three of the four classes, disregarding Σ_2 . It is self-evident that any conclusion reached about the former three can easily be extended to the latter.



4. On the Logical Nature of the Expressions of Knowledge

I premised above that our understanding of what may count as expressions of knowledges and as studies of knowledges is in need of some refinement. This is true in two senses, only one of which is strictly relevant to our present task. According to the previous definitions, simple or individual knowledges are either expressions or studies of knowledge. However, it is clear that such basic units of knowledge should only be defined as, *above all*, K-expressions or as, *above all*, K-studies, since any study of objective knowledge is also

an expression of objective knowledge, and some expressions of objective knowledge may, to some extent, concern some aspects of knowledges. This specification is rather obvious and in what follows I do not mean to render the terminology of this chapter any more difficult than it is already by taking it into account. I shall simply rely on the understandability of the basic contrast. Rather, when I said that the dichotomy was in need of further clarification I had in mind a more interesting specification, one concerning the nature of all the different elements occurring in a complex instance of objective knowledge. In one relevant respect, expressions as well as studies of knowledges can very rarely be *pure* K-expressions or *pure* K-studies, since they always include other components, different in their nature from knowledge, but which cannot always be disentangled from it. Consider the following trivial examples. A textbook of physics is usually taken to be an example *par excellence* of a complex set of K-expressions. Yet, it will contain not only scientific knowledges but also some literary forms of expression, maybe a few hypotheses that are not already established, further remarks by the author, an index and a preface, many symbols not strictly relevant to the topic like page numbers, and so forth. Similarly, a theory about perceptual knowledge will not be purely a complex study of knowledges, for it will also entail extraneous theoretical elements like assumptions, options, definitions and so on. From the fact that knowledges are very often impure expressions or studies of knowledge, it follows that more precise formulations of D_5 and D_6 will state that:

- $D_5^*)$ K-expressions =_{def.} possibly impure knowledges concerning topics different from objective knowledge itself; and
- $D_6^*)$ K-studies =_{def.} possibly impure knowledges concerning objective knowledge itself.

D_5^* and D_6^* allow the elaboration of two formulas for all the members of Σ_1 and of Σ_3 , which can be used to understand the nature of their members. Let us see how (a formula for Σ_4 will be given below).

Types of classes of possible knowledges as different as Physics,

Astrology, History of Art, Computer Science, Theology, and Anthropology all belong to Σ_3 as K-expressions. At first sight this may appear a rather peculiar grouping, but it is a direct and perfectly understandable consequence of the fact that they can all be produced as members of Σ_3 , by means of an interpretation of the following formula (let us call it " F^*_3 " i.e. recursive formula for the third sub-class of Σ):

- F^*_3) Σ_3 is the class of all K-expressions which (are supposed to) consist of possibly impure, public instances in themselves of a certain kind of objective knowledge, concerning some particular knowable topic different from objective knowledge itself.

In all the following formulas I will drop the proviso in brackets, again just for the sake of simplicity. It is useful here to recall that we still do not have a theory of knowledge, and that therefore, as far as we know, a subject like Astrology may or may not belong to Σ_3 .

F^*_3 can be considerably improved, both by presenting some specification for the nature of objective knowledge and by refining its object, i.e. by presenting a more detailed interpretation of the clause "some particular topic". Eventually, the first goal could be achieved by providing, for each case of a K-expression, an interpretation of the clause "a certain kind of" in terms of specifications such as "implicit", "explicit", "theoretical", "practical", "logical", "empirical" and the like, but in this context it is better to leave the formula vague. In order to elaborate a formula valid for each member of Σ_3 , that is a formula that may enable us to speak broadly of a member of Σ_3 , we need to leave the nature of objective knowledge indeterminate.

Finding a different terminology for "some particular knowable topic" is easier. We already know that the expression is to be understood in its broadest sense, so as to include numbers, souls, God, practical skills, the nature of atoms, grammar rules, your birthday, my telephone number, the way one should cook pasta properly even if one is living in Oxford and so forth. All this can be expressed more precisely by introducing a variable ranging over a Domain defined thus:

- D_8) the domain over which x will range =_{def.} the set containing all the instances of what is liable to be known, excluding the nature of objective knowledge itself =_{def.} D_k .

Because of the clause “excluding the nature of objective knowledge itself”, D_k is a non-reflexive set of topics of objective knowledge. Of course, D_k is semantically co-extensive with the domain referred to by the more general expression “some particular knowable topic”. At this point, we can obtain any possible instance of K-expression by operating every possible substitution of x in F^*_3 with an interpretation in D_k .

Before bringing this section to a close, one last comment is in order. Although it could logically be argued that in Σ_3 there are at most as many public K-expressions as interpretations valid for x in D_k , obviously this is merely a hypothetical upper limit. In the first place, it should be noted that two atomic knowledges gradually become closer to each other—and are therefore likely to be identified as parts of a broader, molecular K-expression—when the interpretations of their x tend to appear more like two aspects of a third value for x rather than two real, different values for two separate interpretations of x . We are inclined to speak of *pieces* of objective knowledge instead of *instances*—also with a certain indication of incompleteness—when we encounter cases of objective knowledge that focus too narrowly on a small topic. So, unless we add some characterisation which makes the specific case significant enough,⁸ an instance of objective knowledge such as “S’ knowledge that a cat ate some meat this morning” may hardly be considered a K-expression in itself. Rather, it will be regarded as part of a larger *body* of knowledges, e.g. S’ knowledge that cats are carnivorous, in terms of “it is known that cats are carnivorous”. Note that by this I do not mean to explain the phenomenon of *epistemic molecularisation* but only to

⁸ We cannot disregard the context, for if S’ knowledge about a particular cat’s meal is given crucial importance by some particular context (suppose the safety of a nation depends on it) we would be more inclined to accept it as a real instance of knowledge in itself. It is the context of a knowledge which provides it with meaning and hence value.

render it explicit. Certainly, there is an interesting sense in which scientific laws can be seen as the results of ordering procedures among clusters of knowledges concerning contiguous interpretations of x . But how do we characterise such contiguity? That is, how do we establish whether two interpretations of x represent two completely different values of x or two aspects of a third value? The kind of rules which guide the knower in assembling families of K -expressions into some clusters rather than others—one may think, for example, about Hume's law of association—and the degree of complexity which has to be reached by such a cluster in order to count as a real instance of knowledge is a field still requiring further investigation. The problem seems to resemble the question about the number and type of words we have in a language: why those and not others? The very principle of epistemic compositionality underlying the process through which the continuum of human knowledge comes to be shaped into an ordered collection of K s may also be questioned, as it has been in the theory of perception. I make all this explicit here simply to stress the need to be careful not to be misled by our approach in terms of quantification over, and extension of knowledges. I am confident that such a method is functional for our present metatheoretical aims, but I suspect it may also turn out to be insufficiently sophisticated when the specification of the nature of knowledge comes into question.

In the second place, and here we turn to the opposite problem, strong holistic positions, say à la Hegel or à la Bradley, may be interpreted as suggesting that, though there seem to be many public knowledges, in fact they are only partial articulations of one, all-comprehensive public K -expression. The latter would be a *Super, public K-expression*, as it were, or the finite public K -expression of public K -expressions,⁹ whose x is "The Knowable" in itself. For our

⁹ This second expression makes explicit why, for such a holistic approach, epistemology (or "philosophical logic", in an idealistic sense of the expression) would be so important as to be considered first philosophy. In fact, it is difficult to maintain our distinction between expressions and studies of knowledge in the case of an idealist position. Bradley's scepticism about the

present needs, however, I suggest we adopt a more moderate position, to the effect that it is as difficult to maintain that there are as many public K-expressions as bits of objective knowledge or single acts of knowledge, or known propositions, and the like, as it is to show that there is only one over-all public K-expression. I shall therefore rely on examples of instances of knowledge provided by our common sense.

So, with the previous *addenda*, F^*_3 can finally be reformulated thus:

- F^*_3) Σ_3 is the class of all K-expressions which consist of possibly impure, public instances in themselves of a certain kind of objective knowledge of/about x , for x ranging over D_k .

Similar observations could be made in order to elaborate a formula for Σ_1 . With the necessary adaptations, we have:

- F^*_1) Σ_1 is the class of all K-expressions which consist of possibly impure, subjective instances of a certain kind of objective knowledge of/about x , for x ranging over D_k .

The time has come to turn to Σ_4 .

5. On the Logical Nature of the Studies of Knowledges

Σ_4 is a class of knowledges far less crowded than Σ_1 or Σ_3 . I shall consider it open, since there are different opinions, among philosophers and scientists, about what, and how many public K-studies of knowledges there may be. For example, someone might want to count as K-studies disciplines such as Psycholinguistics or the Theory of perception, considering them as autonomous branches of knowledge which investigate the nature of certain types of objective knowledge. Here the issue is not really significant, since our present interest is in the nature of epistemology only. Hence, within the limits of this chapter, one may consider—besides epistemology—only a limited number of standard members of Σ_4 , such as Neurology,

nature and value of epistemology (cf. F. H. Bradley, "A Defence of Personalism in Psychology", *Mind* 9 (1900), pp. 26-45) should not mislead us.

Physiology, Cognitive Psychology, AI or Sociology of Knowledge, as a list of examples large enough to allow any satisfactory comparison of approaches that any reader may wish to draw. I shall continue to refer to all the members of Σ_4 by the label “cognitive studies” whenever the similarity of the expression to “cognitive sciences” is not misleading.

To start with a truism, a common characteristic of cognitive studies is that—though in different ways—they all investigate the nature of human knowledge. As I remarked at the outset, knowledge can be seen to consist of at least two different kind of phenomena, the process of knowing ($\Re(S, O)$), which produces knowledges, and knowledges themselves, seen as the total outcome of such a process, the global encyclopaedia Σ . It follows that any member of Σ_4 can be supposed to investigate the characteristics of human knowledge by focusing on objective knowledge and/or on its genesis, i.e. on the nature of the encyclopaedia or the process of knowing which produces it. According to the extensionalist approach so far endorsed, we shall start by considering what is implied by an investigation of knowledges in terms of members of Σ .

As a first approximation, to say that Σ_4 -members investigate the nature of knowledges is tantamount to saying that Σ_4 -members investigate the nature of Σ_1/Σ_3 -members, and this is equivalent to asserting that cognitive studies relate to K-expressions as to the data on which to carry out their studies of knowledge. In other words, Σ_1 and Σ_3 are for Σ_4 at the same time a source of information and its proper objects of investigation. Such a plausible presentation of the relation occurring between members of Σ_4 and of Σ_1/Σ_3 can be expressed more precisely by a formula for Σ_4 to which similar comments made above about F^*_1* and F^*_3* also apply:

- $F^*_4)$ Σ_4 is the class of all K-studies which consist of possibly impure, public instances in themselves of a certain kind of objective knowledge about knowledges, as these are obtained by the interpretations of F^*_1* and/or F^*_3* .

The “about”-clause is best interpreted as meaning that the relation between cognitive studies and K-expressions is one of theory and

metatheory. Σ_4 -members have a higher level in the hierarchy of instances of objective knowledge. For them interpretations of F^*_1* and F^*_3* represent both a source of information and the proper object of investigation.

Let us turn now to the second issue, that is what it means to say that Σ_4 -members investigate the nature of the process of knowing. According to the basic formula introduced above, the initial genesis of knowledges is due to the occurrence of a relation $\mathfrak{R}$ of “knowing” between a knower and a topic liable of knowledge. This formulation must be improved by adding at least three more specifications. Since it is reasonable to accept that, in the long run, the genesis of any objective knowledge depends on the *cognitive capacities* of the knower, without which there would be no knowledge at all,¹⁰ in the process of knowing the cognitive activities of S can be considered the *conditio sine qua non* for the emergence of knowledges. This nominalist principle is complementary to what has been said above about the historical restraint on the nature of knowledges. From this, it follows that we are faced, *a parte post*, with the possibility that once some knowledges have been obtained through the original relation ($\mathfrak{R}(S, O)$) then further knowledges Ks can be produced on their basis, both in the sense that there may be logical methods for the production of knowledges, and in the sense that such methods could be implemented by mechanical procedures, like those followed by a computer applying an algorithm, or even by a human being who blindly manipulates such knowledges via mere clerical procedures. And finally, it also follows that we are faced, *a parte ante*, with the question of what is the genetic process that leads a human being to entertain an epistemic relation with some knowable topic. Assuming that:

¹⁰ This is quite a strong commitment, for see K. R. Popper, “Epistemology without a Knowing Subject” in *Objective Knowledge*, (Oxford: Oxford U. P., 1972), Chap. III, yet unlike Popper I do not interpret the relation between knower and knowledges as being like the one between a *reader* and books, but rather as being like that between a *writer* and books. See the last chapter for a detailed discussion of this point.

- D₉) the process followed by a knower in the formulation or acquisition of some knowledges =_{def.} *cognitive processes*; that
- D₁₀) the process whereby it is possible to produce further, new knowledges on the basis of some already established knowledges =_{def.} *the growing-process of knowledges*; and that
- D₁₁) the genetic process whereby a relation of knowing comes to be established, and hence P-knowing produces knowledges =_{def.} *the genesis of P-knowing*;

then Σ_4 -members can investigate the nature of P-knowing and the genesis of knowledges in three different senses, that is by inquiring about

- G₁) the genetic process that leads to the institution of P-knowing—i.e. the kind of genetic relation (R_g) occurring between a human being (HB, not yet a human knowing subject) and a knowable object (R_g (HB, O)), or to be more abstract and general, between mind and being—which is responsible¹¹ for
 - a) the occurrence of the P-knowing (i.e. ($\mathfrak{R}$ (S, O))); hence for
 - b) the activation of the highest functions of the cognitive processes; and therefore for
 - c) the genetic relation occurring between P-knowing and knowledges (R_g (P-knowing, Ks));
- G₂) the genetic relation that links the cognitive processes of a knower S to the production of S' knowledges; and
- G₃) the genetic relation occurring between logical methods, initial knowledges as input and new knowledges as output.

Accordingly, we can now expand F^*_4 thus:

- F^*_4 *) Σ_4 is the class of all K-studies which consist of possibly impure, public instances in themselves of a certain kind of objective knowledge of/about:
 - a) knowledges obtained by the interpretations of F^*_1 *) and/or F^*_3 *);
 - and/or

¹¹ Here I am treating any genetic relation as binary, but only for the sake of simplicity. Of course, if a and b are responsible for the creation of c, the genetic relation is, strictly speaking, ternary.

b) the genesis of knowledges according to G_1 , G_2 and G_3 .

If this is an adequate way of describing, from a purely formal perspective, what cognitive studies, i.e. epistemology and cognitive sciences are, it is now time to consider the specific position enjoyed by epistemology with respect to the other members of Σ_4 .

6. Five Features of Epistemology

If we agree that there is a discipline studying the nature of knowledge which we call epistemology, that, following the previous scheme, this discipline belongs to Σ_4 , and that:

- D_{12}) any K-study belonging to Σ_4 and different from epistemology
 $=_{\text{def.}}$ *cognitive science*;

it now becomes possible to present a few essential elucidations about the theoretical status of epistemology. Such elucidations may be interpreted as answers to the following three questions:

- 1) what, if any, is the special task of epistemology?
- 2) are there specific features which differentiate epistemology from cognitive sciences?
- 3) what is the relation between epistemology and the cognitive sciences?

In the rest of this section I shall suggest that from the special task of epistemology there follow five features that are basically original and distinguish epistemology from any other cognitive study. I will then briefly consider and reject the possibility of interpreting such characteristics as being strictly dependent on the a priori nature of epistemology. Finally, I shall argue that the distinctive orientation of a philosophical theory with respect to the process of knowing is deeply dissimilar from that of the cognitive sciences, and then that such a difference reveals the occurrence of three kinds of relations between the former and the latter.

Traditionally, the task of epistemology has often been defined in terms of rational analysis of objective knowledge. One may be inclined to accept this first approximation provided some further stipulations are endorsed as well. To start with, rational analysis has

to be taken as meaning both conceptual analysis and logical reconstruction. By the former I refer to epistemology's fundamental task of giving a clarifying explanation of puzzling issues and interesting topics concerning the nature of objective knowledge. Key-terms like "truth", "justification" or "complexity", behaviours such as "lying" "believing" or "remembering", issues like the reliability of the sources of our knowledge or of methods like induction, facts such as the achievements of the mathematical sciences, provide the problematic input on which epistemology exercises the explanatory and hypothetically resolving power of its conceptual analysis. On the other hand, the task of a logical reconstruction reveals the necessity of giving a consistent, whole picture of the nature of at least a specific area of objective knowledge, which in case has previously been explained by a conceptual analysis. In short, once epistemology has tried to settle the main problems concerning the nature of objective knowledge, it should also attempt to achieve hypothetical reconstructions of the main areas of objective knowledge and it is to be hoped, in the long run, of objective knowledge itself as a whole topic. A more specific explanation of what I mean here by logical reconstruction can be provided by means of a comparison with what Reichenbach said on the point, even if in a slightly different context. As he put it:

epistemology does not regard the processes of thinking in their actual occurrence; this task is entirely left to psychology. What epistemology intends is to construct thinking processes in a way which they ought to occur if they are to be ranged in a consistent system; [...] epistemology thus considers a *logical substitute* [my italics] rather than real processes. For this logical substitute the term *rational reconstruction* has been introduced.¹²

12 H. Reichenbach, *Experience and Prediction* (Chicago & London: The University of Chicago Press, 1966). In a footnote, Reichenbach adds "The term *rationale Nachkonstruktion* was used by Carnap in *Der Logische Aufbau der Welt*, Berlin & Leipzig, 1928", see R. Carnap, *The Logical Structure of the World*, Eng. tr. by R. A. George (London: Routledge and Kegan

Along these lines, epistemology is to be understood as a rational, abstract reconstruction of its topic, which aims at the production of a logical model of at least certain aspects of objective knowledge. Of course a logical model does not necessarily mean a logical-mathematical one, but rather a detailed and structured system which is necessarily consistent, essential in its assumptions and self-reflective (so that its conclusions are self-applicable), as far as possible elegant and schematic in its formulations, clear and self-evident, i.e. virtually free from implicit presuppositions and obscure terminology, and highly explanatory in order to account for all the data already acquired in other fields. A logical model, in this sense, can be equated not so much with an analogical model as with a flow-chart, which is heuristic only because its material is clearly ordered and well specified.

Since epistemology aims in the long run at a logical explanation and reconstruction of human knowledge, and since its topic consists of two separable elements, i.e. P-knowing and knowledges, it follows that the analytical task of epistemology is to be understood as the conceptual analysis and logical reconstruction, by means of logical models, of both P-knowing and knowledges. Then, according to F^*_4 , we obtain the following definition:

- D_{13} *epistemology* =_{def.} the K-study belonging to Σ_4 which consists of impure, public instances in themselves of logical analysis of (i) the nature of knowledges and of (ii) its genesis according to G_1/G_3 , by means of logical models.

I have already tacitly removed the “or”-clause in “and/or”, for I believe this elimination is unproblematic. Obviously, concerning (i) the most appropriate approach will usually be provided by a conceptual analysis of what is already thought to represent objective knowledge, whereas (ii) calls into play, primarily, a logical reconstruction of the different processes that lead to the formulation of knowledges. In the former case, we need to make sense of what is already supposed to

Paul, 1967). Note how the dynamic “Aufbau”—“construction”—is translated by the static “structure”.

be knowledge and a reconstruction would be, above all, a final model which puts together all the analytic fragments of our work coherently. Whereas what is mainly required in the latter case is a reconstruction in terms of conjectures about what the previous situation might have been. As in archaeological work, we must hypothesise about the layout of the city from the ruins we can study. Conceptual analysis can only provide some assistance in reconstructing the map of the genesis of knowledges.

Five relevant features of epistemology depend, or may now be interpreted as depending, on the previous characterisation of its task:

A) As regards the formulation of a convincing and fully satisfactory conceptual analysis and logical reconstruction, we can ascribe to epistemology a critical function. On the grounds of its analytic work, epistemology can decide, and therefore give advice on, what is a proper instance of objective knowledge and what is not, and can distinguish between, and thus give advice on, what the most adequate procedures are which lead to genuine instances of objective knowledge and procedures which do not.

B) A second feature, characteristic of epistemology alone among K-studies, is that its investigation, methods and final goals overlap. A logical analysis of objective knowledge and its genesis is at the same time what a philosophical theory of knowledge consists of, its main goal and its principal instrument.

C) Since epistemology, as a study of knowledge, is also an instance of objective knowledge, it follows that it must always examine knowledge from an internal point of view, i.e. from the point of view of knowledge itself. This explains why, in epistemology, the research is identical with the final theoretical task. A philosophical theory of knowledge is to be interpreted as the ultimate theoretical level in the hierarchical structure of the human encyclopaedia, at which knowledge can investigate itself and reach the highest degree of reflective self-awareness. Consequently, we can imagine a sort of ascending scale in which we would have:

- I) subjective expressions of objective knowledge;
- II) subjective studies of objective knowledge;

III) objective expressions of objective knowledge; and finally

IV) objective studies of objective knowledge.

In relation to (C), it follows that

D) Epistemology enjoys the further property of being the only member of Σ_4 that is completely autonomous in the philological sense of being self-regulating. Whatever conclusions a philosophical theory may reach about the nature of knowledge, these will also have to be directly applicable to the theory itself, as well as to all the other members of Σ_1 - Σ_4 . This is the sense in which I am here using the expression "self-regulating". The more or less philosophical nature of a theory of knowledge also depends on the real possibility of applying to the theory itself its own results. Or, to put it more dramatically, only a philosophical theory of knowledge is powerful enough to run the risk of falsifying itself.

E) Finally, in relation to (D), epistemology has the additional and fundamental feature of dealing with the most radical questions that can be formulated about the nature of knowledge. These are the sceptical questions. We shall see in far greater detail that the fact that epistemology takes its first step from a sceptical challenge is not a mere expedient, exploited by textbooks of epistemology in order to introduce their topic. From Plato to Descartes, from Hume to Kant, from Berkeley to Wittgenstein, sceptical doubts have been the leading motive of any fundamental enquiry into the nature of knowledge. It is the practice of radical doubt that is responsible for starting the process whereby reflection reaches self-awareness. Scepticism turns the philosopher's attention away from his original questions, those concerning the nature of reality and of man, and towards the instrument of his own investigation, i.e. knowledge. There would be no philosophical theory of knowledge without previous doubts of a sceptical kind. Given the fact that the sceptical questions are the most radical that can be formulated about knowledge, it becomes clear that the self-regulating nature of epistemology introduced in (D) is just the counterpart of its anti-sceptical nature. Since epistemology is the study of knowledge which tries to cope with the ultimate questions about knowledge, it must also be the study whose

value, as itself an actual and most fundamental instance of objective knowledge, is to be checked according to its own conclusions, and *vice versa*.¹³

7. *Is Epistemology an a priori Study of Knowledge?*

The previous features are very often summed up by saying that epistemology is an *a priori* investigation of human knowledge. If such a characterisation is only a general way of stressing the fact that epistemology does not make experiments, control data, calculate formulas and so on but, as the highest level of abstraction, limits itself to providing reasonings and logical analyses about its own subject, then so far we have already adopted an *a priori* characterisation of its nature. In this vague sense, epistemology is indeed a matter of *a priori* reflection on the nature and genesis of the global encyclopaedia of human knowledge. But if such a characterisation is supposed to be the outcome of a more qualified analysis, then further explanation is required to show that, in this context, the specification would be premature and not entirely appropriate.

To start with, one can distinguish at least two principal ways of understanding the notion of *a priori*. I shall designate them the strong and the weak interpretation, since, although they differ, they are also related in such a way that the former seems to presuppose the latter.

According to the strong interpretation, to qualify a knowledge as *a priori* is tantamount to describing it as *non-empirical*. This view, which underlies the “vague sense” of *a priori* I have introduced above, is endorsed by Alvin Goldman, for instance, when he writes

¹³ For this conception of epistemology, as being closely connected to the sceptical questioning and as a self-regulative enterprise cf. G. W. F. Hegel, *Verhältniss des Skeptizismus zur Philosophie* [...], in *Samtliche Werke*, ed. by H. Glockner, (Stuttgart: 1927-40), Vol. I, pp. 215-75, Eng. tr. “On the Relationship of Scepticism with Philosophy” in G. Di Giovanni and H. S. Harris (eds.) *Between Kant and Hegel*, pp. 311-62; and also J. P. Dancy, *An Introduction to Contemporary Epistemology* (Oxford: Blackwell, 1985), last chapter, entitled “Is Epistemology possible?”.

that:

[S] It is often said that philosophical analysis is an a priori enterprise. [...] it seems to be a purely reflective inquiry, requiring no observational or empirical component. [...] While arguing that certain phases of epistemology require input from psychology and other cognitive sciences, I have granted that the more 'conceptual' stages of epistemology are strictly philosophical and (hence) non-empirical.¹⁴

According to S, a priori is to be used primarily as an *adverb* establishing the way we come to know something about our knowledge. Note that, on this account, working hypotheses can also be a priori. Quite simply, if an epistemological theory T about an extension of knowledge K is a priori in this strong sense then:

- S*) T states something about K, and it does so without necessarily taking into account any empirical information concerning K. T approaches K a priori.

According to a weaker interpretation, if we qualify a content of knowledge—a judgement in Kant's usage, or a proposition for Chisholm—as a priori then:

[W] [...] like all other knowledge, [our a priori knowledge] 'begins with experience' but unlike our a posteriori knowledge, it does not 'arise out of experience'.¹⁵ A priori knowledge may be said to 'begin with experience' in the following sense: there is no a priori knowledge until some proposition is in fact contemplated and understood.¹⁶

According to W, a priori is primarily an *adjective* that qualifies some particular extension of knowledge, as in the case of logical statements for example. Thus, if a certain instance of knowledge K is a priori in this weaker sense then:

- W*) K has the *property* of being knowable a priori.

¹⁴ A. Goldman, "Psychology and Philosophical Analysis", *Proceedings of the Aristotelian Society* 89 (1989), Part III, pp. 195-209, quotation from p. 195.

¹⁵ I. Kant, *Critique of Pure Reason*, ed. by Norman Kemp Smith (London: Macmillan, 1933), B1, p. 41.

¹⁶ R. Chisholm, *Theory of Knowledge*, third edition (Englewood Cliffs, New Jersey: Prentice-Hall International Editions, 1989), p. 31.

Are we to qualify epistemology as an a priori study in the stronger or the weaker sense of the expression? Perhaps neither, as I am going to suggest.

The greatest advantage of S* is that it shares the same perspective adopted in this chapter. It presents a characteristic feature of epistemology in terms of the kind of relation between the extension of knowledge and its study. S* warrants that there are interesting cases in which such a relation can be described as one of an a priori type. However, whether or not epistemology may often try to deal with knowledges non-empirically, Goldmann himself acknowledges straight away that this is not always the case. In its work, epistemology may have to anchor itself to a certain amount of empirical evidence, while not all the contents constituting an epistemology may be originated non-empirically. This should count as an initial good reason for exercising some caution in presenting epistemology simply as an a priori study in the sense of S*. But there are others, for S* spells out only part of the truth. An adverbial interpretation of the a priori feature presupposes the validity of a particular interpretation of W*. If T can successfully state p about K a priori—as maintained by S*—then at least some features of K are successfully knowable a priori, as implied by the adjectival interpretation of the a priori W*. For want of a better label, let me refer to this notion of a priori as to the *first-level property* enjoyed by the object investigated by the theory. To qualify epistemology as a discipline that deals with knowledges in an a priori way is to claim that somehow, but to a sufficient degree, its objects are knowable a priori, that is the contents of human knowledge possess features which do not require anything to be investigated but pure reflection. Obviously, this claim is much more controversial than the one made by S*. So much so that there are no reasons why we should accept such a characterisation of epistemology without further arguments showing that the extension of knowledge has in fact this first-level property of being knowable a priori, at least partially. Once the question:

- whether epistemology should be described as an a priori discipline according to S*

has become

- whether it may be so qualified according to W^* as well, because S^* requires a certain interpretation of W^*

then a second problem arises. When we assert that epistemology is a priori we may be characterising not the way the latter deals with its object according to S^* —and therefore the nature of its object according to the first-level interpretation of W^* —but rather the nature of its own contents. In contrast to what the connection between S^* and W^* maintains, epistemology may be supposed to be an a priori study in the strict sense that it also (if not mainly or solely) consists *in itself* of a priori statements. This is the *second-level* sense of a priori purported by W^* , namely the sense in which it is the contents of a theory and not (or not primarily) its objects that enjoy the property of being knowable a priori. Suppose now the latter were the case. If epistemology consists of a majority of statements which can be formulated without taking into account any other empirical information, i.e. it is an a priori discipline in the second-level, weak sense stated by W^* then, although it may be perfectly compatible with the conclusions reached in this chapter, this would promote a characterisation of epistemology quite extraneous to the extensionalist approach assumed so far. As I have specified with respect to S^* , we have concentrated on the nature of the objects studied by epistemology—i.e. knowledges—and on the relation that links the theory to its object, not on the features that characterise the single class of members of Σ which constitutes the discipline we call epistemology. It follows that, given our present approach, this particular interpretation of W^* would lead us astray and there are no obvious reasons why we should decide to adopt it.

We need therefore to step back to the previous possibility, namely that when we qualify epistemology in terms of S^* and W^* we are only assuming that knowledges, as the subject of study, can be investigated non-empirically. What is implied by this option which may render it different from the one just discussed? The answer is that two different senses of possibility are now called into question. We need to distinguish between

- claiming that *p* comes to describe *f* non-empirically; and
- claiming that *p*, which describes *f*, can be reached non-empirically.

Both alternatives imply that, in the end, *f* allows for an a priori study, but, in the former case, the fact that if *p* can successfully describe *f* non-empirically then *f* is successfully describable in a non-empirical way leads one to acknowledge the further fact that *f* has the actual characteristic or the predisposition of being knowable a priori. Whereas in the latter case we find that, although to reach a description of *f* on a non-empirical basis still implies that *f* is non-empirically describable, we are concerned only with the mere recognition of a logical possibility. A comparison with two different instances of guessing may be enlightening. If you guess the right number of students enrolled at the University of Oxford in 1978 this means that such a number could have been guessed (mere logical possibility) and that you actually did guess it, but it is not equivalent to saying that there was a good chance of guessing it, or that circumstances were such as to render the particular number in question easily guessable in any sense. On the contrary, if you guess the small number of people present in the same room with you at a certain moment, your position is such that your correct guess would be based upon your evidence; one could say that the limited number of people in the room could have been guessed, for the situation (the small number) itself was such as to lead to a correct estimate. When we use *W** disjoined from *S** we presuppose that it is not logically contradictory (that it is logically possible) that human knowledge—either in itself or in terms of an epistemology—may have the property of being knowable a priori. This is a much weaker statement than the assumption that it has the actual characteristic of being so because its knowledge can in fact be reached a priori.

The conclusion to be drawn from the previous considerations is as follows: we may use the a priori formula to describe epistemology in a loose way. If we were to use the label technically and hence more strictly, then I would warn that there are at least two main ways of conceiving something as knowable a priori and that, of these two,

W* presents either

- a) a first-level interpretation of the a priori knowability of knowledges that is in agreement with the approach shared so far (the study of the object and of the relation between the object and the theory) but is also open to question and requires an explicit support before being endorsed as uncontroversial; or
- b) a second-level interpretation of the a priori knowability of the constitutive elements of an epistemology, which is both problematic and lies beyond the limits of our approach.

Whereas, S* is in accord with the extensionalist orientation adopted so far but

- c) it is not fully realistic, for in elaborating an epistemology we also rely on empirical data, at least as a starting point; and
- d) it presupposes a first-level interpretation of the a priori as this is stated in (a).

The crucial point remains then (a), that is whether the basic assumption—shared by both S* and W*—about the non-empirical knowability of the nature of knowledge is justifiable within a theory of knowledge itself. This is precisely the kind of circular question which challenges the possibility of an epistemology *tout court*. I shall leave it untouched for the moment because, when properly formulated, the question is equivalent to asking whether a purely rational investigation of knowledge at the highest level of abstraction is possible at all, and the latter question boils down to nothing less than the problem of the *diallelus*, that is to the question of whether an epistemology which does not beg the essential question of its own justification is possible at all. I shall turn to this important topic at the end of the chapter. Its discussion is going to be the central concern of the second part of the book.

8. On the Relation between Epistemology and the Cognitive Sciences

So far, we have seen what the task of epistemology is supposed to be and how some features of this discipline may be strictly connected with it. Apart from the third feature, all of them render epistemology

an original investigation of K-expressions, which is sufficiently different from any other cognitive study. It is now time to see what positive relations there might be between epistemology and the cognitive sciences. I shall introduce them by focusing on their different orientations towards the investigation of knowledge.

Both P-knowing and knowledges can be approached in two ways, depending on whether the theory has theoretical or pragmatic aims, and some of the basic features that distinguish epistemology from the cognitive sciences depend on such a distinction, for epistemology investigates both P-knowing and knowledges on the basis of theoretical aims, while cognitive sciences have a pragmatic goal. The distinction between the two teleological orientations is quite clear in so far as knowledges are concerned. Epistemology deals with sceptical questions and therefore tries to settle the most radical issues about knowledges. In so doing, the discipline produces knowledge about knowledge for what *appears* (but see chapter six) to be the sake of a better understanding of knowledge itself. On the contrary, any other cognitive science investigates knowledges from a certain point of view, which cannot simply be identified with that of knowledge in itself. In the long run at least, the cognitive sciences aim their studies at historical targets, say medical, psychological, sociological, technical and the like. Things are rather more complicated when the study of P-knowing is concerned. In this case, by logically orientated I mean that epistemology may investigate how K-expressions are historically produced according to G_1/G_3 in order to elaborate a reliable model of how knowledges are obtained, but solely in order to understand the nature of human knowledge in itself, both as knowledges and as P-knowing. Whereas any other K-studies concerned with the investigation of P-knowing, such as cognitive psychology for example, may be interested in the nature of knowledges and may also elaborate a model of how knowledges come to be produced by an arbitrarily chosen or abstract subject according to G_1/G_3 , but solely in order to investigate the nature of knowledge (both P-knowing and knowledges) insofar as historical human and/or artificial knowing subjects are concerned. This difference in approach can

be summarised by saying that, in the long run, epistemology is orientated towards an investigation of Σ_3 and of $\mathfrak{R}$ in $(R_k(S, O))$, while any other cognitive science is more orientated towards an investigation of Σ_1 and of S .

So much for the differences between epistemology and the other cognitive studies. What about the internal connections that there may be among members of Σ_4 ? Three final essential features of epistemology represent the answer to this question. Epistemology, as a member of Σ_4 , is to be considered a K-study which is:

F) *partially dependent* on other members of Σ_4 ;

G) *completely autonomous* from other members of Σ_4 ; and

H) *more fundamental* than any other member of Σ_4 for a full comprehension of the nature of knowledge.

These three features call for a final explanation.

The idea that a philosophical theory of knowledge is partially dependent on other cognitive sciences hardly needs to be defended. Nowadays, it seems almost blindingly obvious that, in order to inquire about the nature of knowledge, epistemology cannot avoid taking into account relevant results already achieved by other cognitive sciences. We have already encountered such an issue above, when talking about the contaminated, adverbially a priori, status of epistemology. Its dependence concerns some of the contents on which epistemology carries out its research. Indeed, the point can be laboured in such a way as to make epistemology seem like just an anachronistic inheritance from some modern philosophers. Such a perspective, however, would only show how misleading the idea that epistemology may depend on information coming from some cognitive science is, when it is not connected with the idea of its autonomy. For, even if its basic information has an external source, epistemology discusses these data via a completely autonomous method. In fact, according to its task and its characterisation, epistemology is autonomous from any other cognitive science belonging to Σ_4 because it has its own goals and its own rules for carrying out its own research, as shown before. However, it depends partially on other cognitive sciences, since its logical model is a particular or-

ganisation of, and must be consistent with, all the information coming from them. The point, as I said above, will be resumed in the last chapter, when the future destiny of epistemology as a theory of the genesis of knowledge will be discussed. Finally, the anti-sceptical and self-regulating characteristics that make epistemology a study concerning the nature of knowledge that is autonomous from cognitive sciences also render it the most fundamental K-study. Unfortunately, the expression more fundamental may be misunderstood in two ways. The first misleading sense of "more fundamental" makes us think about the project—shared by many modern philosophers from Descartes to Kant—of giving a foundation to scientific knowledge on the philosophical basis of a theory of knowledge. One may wonder how many of the scientific results we are enjoying today are due to such efforts in past centuries, yet the present tendency—and I tend to agree with it—is to consider such a task no longer available or even significant for epistemology. I mentioned before an explanatory task for epistemology which presupposes some kind of phenomenology of knowledges, not grounds them. I can only add that epistemology is no more fundamental than any other cognitive science in the sense of being a similar modern foundation of other members of Σ_4 either. In its radical sense, this foundationalist hypothesis is obviously false, since programs of research in cognitive science may be completely in the dark about the most relevant topics elaborated by various philosophical theories of knowledge and yet be very successful. And in its weaker sense—i.e. that cognitive science should take into account, no matter however marginally, what epistemology says about common topics—the hypothesis is not interesting at all. The second sense in which the expression "more fundamental" can be misleading is if it is taken to mean that epistemology leads to a closer analysis of the nature of certain aspects of knowledge than any other cognitive science can. Again, in so far as this assertion is true it is also irrelevant. For plainly any discipline is closer to its own topic than any other. Because of what has been said above about the different orientations of the two kinds of studies, this means only that any particular K-study in Σ_4 is more fundamen-

tal than the others as far as its proper topic is concerned. So, if we take as a point of reference the neurological aspects of the cognitive process of a human brain, a neurological approach will be closer to this topic, and therefore more fundamental, than any other, including epistemology. The right interpretation of “more fundamental” can be given only by assuming an external parameter. And the latter can only be obtained by considering the development of our inquiries about the nature of knowledge. Only in this way is it possible to explain why epistemology represents the most fundamental study of knowledge, for it becomes obvious that it is the theoretical place where the most radical questions that can be formulated about the nature of knowledge are dealt with. The nature of the questions discussed in epistemology overcome the constraint of what is physically possible, to take as its limits the logically possible, viz. suppositions that are at least non self-contradictory, and from this sceptical perspective any cognitive science will always end up being perceived as less fundamental than epistemology with respect to the study of the nature of knowledge. For no matter which cognitive science we are working within, when we start questioning its tenets and results as radically as possible then we almost immediately and inevitably find ourselves outside its limits and within the territory of a philosophy of knowledge.

9. Towards the Problem of the Justification of a Philosophy of Knowledge

The rather tiring task of providing the very general background against which the rest of this research is to be interpreted has now been fulfilled. All it remains to do at this point is to introduce the issue that will be of central concern in the following chapters. I have stated above that epistemology has the distinctive aim of investigating the nature of knowledge with the goal, amongst other things, of giving an answer to the most radical doubts cast on its validity. However, since any philosophical theory of knowledge develops as part of, not apart from the body of human knowledge itself, that is it

is still a member of Σ_4 , any final account of the nature of knowledge is threatened by the problem of its own circular legitimisation. This question is the most direct consequence of the characterisation of epistemology given in this chapter. As the most fundamental and normative K-study, epistemology attempts to answer the most radical questions about knowledge, but can it also solve the questions about its own status, being itself a member of Σ_4 ? In other words, is a sound (i.e. non-fallacious) epistemology possible? And if so, how? Reality leads to the knowledge of it; knowledge requires a theory; the theory is then threatened by the demand for self-justification and the possible lack of a foundation. At this last level, the necessity of providing its own metatheoretical validation puts any philosophical theory of knowledge in an apparently inevitable quandary. Having entered into the dangerous game of ultimate justifications in order to escape from the deadly embrace of cognitive sciences, epistemology now seems doomed to be crushed by a different problem of equal magnitude. For any philosophy of knowledge seems to be forced to admit at least one of the following alternatives. Either its fundamental premises cannot be further justified, and so they must merely be assumed or hypothesised without any supplementary warrant; or they can be justified because they presuppose one or more antecedent premises, but in the latter case too, either we are back to the mere assumption of such anterior premises, or their justification is provided by the theory itself in a circular way; or eventually the very process of searching for a justification gives rise to an endless chain of reasons, in which the legitimisation of each premise presupposes the justification of the previous one and this of still another and so on *ad infinitum*. The sceptic is ready to take advantage of the difficulty resulting from the requirement that a theory of knowledge should justify its own validity. He will consider the previous alternatives as so many fallacies, which undermine the validity of any epistemological project. Although he may accept that there are certain mental, psychological and perceptual phenomena which we discuss in order to establish their epistemic status, and that some of these phenomena (or their effects) could amount to or give rise to real

knowledges, the sceptic maintains that in any case there is no way we can produce a theory which could enable us to assess their epistemic validity without already presupposing an unjustified answer to the original question of the nature of knowledge itself. We could have knowledge, but we are unable to say whether we have knowledge or not without already begging the question about what knowledge is.

The problem just sketched is one of the major issues in the history of epistemology. Any radical questioning about the problem “what is knowledge?” has always led to the formulation of one of its many variations. This has been true since the very early stages of the history of Western thought. Thus, speaking of Agrippa’s five tropes, Jonathan Barnes has written that:

[...] these forms and structure [...] have had a unique influence on the subsequent history of sceptical enquiry, and hence, more generally, on the history of epistemology or the enquiry into the nature and scope of human knowledge: the Agrippan forms lie at the heart of the western philosophical tradition.¹⁷

It will be the task of the following chapter to illustrate how true all this is with respect to the foundationalist challenge, the problem of the *diallelus*.

¹⁷ J. Barnes, *The Toils of Scepticism* (Cambridge: Cambridge U. P., 1990), p. IX.

CHAPTER THREE

THE PROBLEM WITH THE THEORY

A HISTORICAL RECONSTRUCTION

Sed Quis custodiet ipsos custodes?
Juvenal, *The Satires*, VI.347

1. From Sets to Maps

The question of the justification of the premises of a theory of knowledge, outlined at the end of the last chapter, is such a manifest and momentous problem that, though in different forms and disparate contexts, its formulations, the discussions concerning its nature and the attempts made to solve it constitute a continuous thread in the history of epistemology. The purpose of this chapter is to chart the *histoire globale* of the problem, by presenting a critical reconstruction of the hypothetical map of its formulations. By tracing this significant strand in the history of epistemology, I mean to show that Sextus Empiricus' *diallelus*, Montaigne's *rouet*, Chisholm's *Problem of the Criterion*, the *Cartesian Circle*, Hegel's "Scholasticus' absurd resolution", Fries' *trilemma* and Albert's *Munchhausen's trilemma* can all be interpreted as interrelated metamorphoses of what I shall refer to, henceforth, as the metaepistemological problem.

As Foucault noted, disciplines like geography, geology and cartography provide a family of extensionalist analogies which are not quantitative, like those imported from set-theory, but qualitative and therefore more lively and intuitive. This is the familiar distinction between a continuous and a discrete extension, between geometry and arithmetic. The logical power of a computable universe is replaced by the visual force conveyed by the continuous domain of a

space in which the mind can freely navigate. In this chapter, I mean to take advantage of the potential offered by a language which relies on continuity and pictorial metaphors. In order to delimit the historical reconstruction, I shall therefore proceed by individuating three domains—the sceptical, the Cartesian and the Kantian—and then trace within each the principal path followed by the formulation of the problem. In the course of the chapter, we shall see how much philologically the identity of the problem has to be intended throughout the possible worlds represented by the various theories of knowledge.

The general and intuitive account of the metaepistemological problem, suggested at the end of last chapter, provides us with a flexible and heuristic formulation whereby we may recognise several issues in the history of epistemology as contextualised articulations (*variationes*) of the same fundamental problem. Because of its generality, however, what has been said there cannot grant, at the same time, a full appreciation of the most specific features of the problem at stake. Since a more detailed analysis of the logical structure of the problem will be offered only in the next chapter—where I shall be able to exploit the phenomenological input supplied here—at the moment I can only anticipate the major results of that analysis. The fundamental difficulty, which seems to impair any attempt to provide a justification of the premises of a theory of knowledge, can be reduced to the fallacy of a *petitio principii* of a metatheoretical nature. The metaepistemological problem does not jeopardise the validity of human knowledge directly—either in respect of specific sciences or in respect of the ordinary linguistico-doxastic activities and achievements of the individual—but rather the tenability of a theory of knowledge. As a *petitio principii*, the metaepistemological problem does not render the justification of a theory of knowledge logically self-contradictory, but it does deprive it of any cogent strength with respect to the sceptical attack. It is hoped that these features of the problem will become clearer in the course of the historical reconstruction. As I said before, they are going to be subject to explicit examination in the next chapter.

2. The Sceptical Domain

2.1. Sextus Empiricus' *Diallelus*

In an oft-quoted passage in the *Outlines of Pyrrhonism*, Sextus Empiricus provides the first, highly influential formulation of the meta-epistemological problem:

“[...] in order to decide the dispute which has arisen about the criterion, we must possess an accepted criterion by which we shall be able to judge the dispute; and in order to possess an accepted criterion, the dispute about the criterion must first be decided. And when the argument thus reduces itself to a form of circular reasoning the discovery of the criterion becomes impracticable, since we do not allow them [the dogmatics] to adopt a criterion by assumption, while if they offer to judge the criterion by a criterion we force them to a regress *ad infinitum*. And furthermore, since demonstration requires a demonstrated criterion, while the criterion requires an approved demonstration, they are forced into circular reasoning (εἰς τὸν διάλληλον ἐκβάλλονται τρόπον).”¹

The argument occurs after a long discussion of Aenesidemus' ten tropes—which, together with Agrippa's first and third trope, raise doubts, in terms of its fallibility and relativity, about the capacity of human knowledge to capture the intrinsic nature of reality in itself (τὰ ὑποκείμενα, “what lies under”)—and before a more detailed discussion of the nature of the criterion. It is a combination of Agrippa's second, fourth and fifth tropes,² i.e. *regressus*, *hypothesis* and

¹ Sextus Empiricus, *Outlines of Pyrrhonism*, Eng. tr. by R. G. Bury (Cambridge Mass.: Harvard U. P., 1976), II. 20. The argument is also summarised by Diogenes Laertius in his “Life of Pyrrho”, see the *Lives of Eminent Philosophers*, Book IX, 90-91, Eng. tr. by R. D. Hicks, (Cambridge Mass.: Harvard U. P., 1950), pp. 501-3.

² For a more detailed analysis of the argument see J. Barnes, *The Toils of Scepticism* (Cambridge: Cambridge U. P., 1990), especially p. 115 and ff.

diallelus, but for the sake of simplicity I shall refer to it more briefly as the *diallelus*. This synecdoche is justified by the fact that Sextus employs Agrippa's second and fourth tropes as secondary attacks on alternative solutions of the more fundamental problem of circularity, as we shall verify in the next chapter.

Sextus was well aware of the importance of the argument. The difficulty it raises is said to be

sufficient to expose the rashness of the Dogmatists with respect of the doctrine of the Criterion.³

Sextus' reference to the doctrine of the criterion is significant. The discussion on the nature of the criterion was a central theme in Hellenistic and post-Hellenistic theories of knowledge,⁴ so much so that

At the time of Ptolemy and Sextus it had become virtually *de rigueur* for any thinker to state his position on the "criterion of truth" [...]⁵

As a historiographic label, "the problem of the criterion" refers both to

Stoic and Epicurean accounts of the natural means at our disposal for making utterly secure discriminations between truth and falsehood,⁶

that is, between mere beliefs and proper instances of knowledge, and to the relative sceptical doubts cast on such an epistemological enterprise. A brief incursion into the debate on the nature of the criterion is therefore unavoidable if we want to understand the nature of the *diallelus* properly.

³ Sextus Empiricus, *Outlines*, II. 21.

⁴ Cf. G. Striker, "The Problem of the Criterion" in S. Everson (ed.), *Epistemology* (Cambridge: Cambridge U. P., 1990), pp. 143-160.

⁵ A. A. Long, "Ptolemy on the Criterion: an Epistemology for the Practising Scientist", in P. Huby and G. Neal (eds.), *The Criterion of Truth*, (Liverpool: Liverpool U. P., 1989), p. 154.

⁶ *Ibid.*, p. 156.

2.1.1. *The Problem of the Criterion*

Since Hellenistic philosophers and doxographers ended up by organising the whole field of epistemological discussion under the heading of “the problem of the criterion” (Περὶ κριτηρίου),⁷ the term το κριτήριον had acquired several meanings by the time of Sextus Empiricus.⁸ Hence it is understandable that the proper analysis of the family of issues which goes under such a general label may still represent an open field for philosophical and scholarly research. In the present context, however, two general observations will suffice in order to locate the *diallelus* within such a setting and to emphasise its importance.

Firstly, according to the literature that has come down to us, we know that, at least since the time of Epicurus and the Stoics, philosophers started being increasingly concerned with the task of justifying the possibility and hence the validity of human knowledge of the world, rather than with investigation of the latter’s nature. Of course, this may have been very much a matter of gradual change in interests rather than an epistemological revolution, and it has been suggested⁹ that the change should also be interpreted as both a cause and a consequence of the historical development of ancient scepticism.

Our second observation concerns a specific feature of the new epistemological trend. Hellenistic philosophers discussed the validity of human knowledge by concentrating on the reliability of *the criterion as a means* both *whereby* and *according to which* knowledge of the intrinsic nature of the world could be gained. For Epicurus and

⁷ *Ibid.*, p. 154.

⁸ About the several ways in which the word “κριτήριον” could be used, cf. for example Sextus Empiricus, *Against the Dogmatists*, Eng. tr. by R. G. Bury, (Cambridge Mass.: Harvard U. P. 1976), I. 29-37. G. Striker’s work, Κριτήριον τῆς ἀληθείας, published in *Nachrichten der Akademie der Wissenschaften in Göttingen*, Phil.-hist. K1. (1974), pp. 47-110 is the best investigation of the history of the problem in ancient philosophy.

⁹ Long, “Ptolemy on the Criterion: an Epistemology for the Practising Scientist”, p. 154.

the Stoics, the unique question “is knowledge possible?” had a unique set of answers in terms of individuation of a *criterion whereby* knowledge was both attainable *and* justifiable. For instance, sense-impressions, preconceptions and feelings might count as three criteria of knowledge, both in the sense that they are sources of knowledge, i.e. *criteria whereby* we obtain knowledge, and in the sense that they are principles which can justify knowledge and thus, we may suppose, an epistemology as well, i.e. *criteria according to which* we can support certain premises on which a theory of knowledge can then justify its claims to be able to assess, and discriminate among, the set of potential knowledges.

The observations just made should remind us of a point which will turn out to be of some importance in the following paragraphs: historically, the problem of the criterion concerns a combination of interwoven questions on the nature of knowledge and on the possibility of establishing its nature without begging the question. Thus it cannot simply be equated to, but rather includes, the metaepistemological problem of the *diallelus*. On the other hand, the same observations suggest that the twofold nature of the criterion—as an *instrument* through which we obtain our knowledge and as a *method* according to which we may test our knowledge and hence our epistemology—may be responsible for the fact that Sextus’ attack on the possibility of its formulation appears double-layered. By contrasting the possibility of providing a proper criterion of truth or of knowledge, Sextus’ argument combines theoretical and metatheoretical aspects of the issue almost inextricably. The *diallelus* was meant as, or at least turned out to be, an argument both against the possibility of knowledge and against the possibility of a theory of knowledge or, in other words, against knowledge in all its expressions, including that of an epistemology.

Despite all the previous provisos, the wider context of the problem of the criterion should not prevent us from seeing that the *diallelus* primarily challenges the possibility of formulating a theory of knowledge without begging the initial question; only derivatively is

it addressed against the validity of knowledge *simpliciter*.¹⁰ That Sextus may be formulating a metatheoretical objection and not simply an epistemological one is not surprising once we realise that discussion of the nature of the criterion had already acquired a more methodological and therefore metatheoretical nature in the passage from Epicurus to the Stoics.¹¹ The anti-epistemological nature of the *diallelus*, and hence its metatheoretical level, may have been left implicit by Sextus, but it is indubitable that the paragraph quoted above represents perfectly well both the problem and all the alternatives to which acceptance of the question of the validation of an epistemology may give rise. As we shall see, it is precisely in its anti-epistemological function that the Sextian text will be interpreted throughout the history of epistemology. But before turning to the history of the *diallelus*, it is better to address another, related question first: is the *diallelus* the right place from which to start delineating a map of the metamorphoses of the metaepistemological problem? There are at least three main factors that justify such a choice.

Firstly, it is generally recognised that neither Plato (even in the *Theaetetus*) nor Aristotle were very concerned with sceptical problems,¹² and even when they can be seen to be preoccupied by proto-sceptical questions, the latter are generally¹³ to be characterised as

¹⁰ That the metatheoretical attack on the criterion is only one weapon in the sceptical arsenal is clear from the articulated analyses given by A. Long in his "Sextus Empiricus on the Criterion of Truth", *Bulletin of the Institute of Classical Studies of the University of London* 25 (1978), pp. 35-49 and by J. Barnes, *The Toils of Scepticism* (Cambridge: Cambridge U. P., 1990).

¹¹ Cf. Striker, "The Problem of the Criterion", pp. 149, 151, 152 and 157.

¹² Cf. Striker, "The Problem of the Criterion", p. 143, note 1. See also the references in this article to the work of M. Burnyeat on Plato's *Theaetetus* together with his recent edition, with a revised translation and comment, of the *Theaetetus* (Cambridge, Ind.: Hackett, 1990).

¹³ I say generally because it has seemed possible to recognise in Meno's paradox a methodological interest by Plato (cf. Plato, *Meno*, 80d and ff.). But I shall disregard such an issue in this context.

objections on the nature of knowledge rather than objections on the nature of epistemology. Anthony Long has convincingly shown that Aristotle's epistemological work can also be related, more or less explicitly, to sceptical issues, but he has also presented his reconstruction of Aristotle's concern with a metaepistemological issue retrospectively, that is from the point of view of the more articulated formulation of the sceptical problems found in Sextus Empiricus.¹⁴ The question deserves full attention for it will become evident below that those philosophers who are interested in the foundationalist problem but disregard the sceptical, metatheoretical challenge, ordinarily refer (though rather misleadingly) to Aristotle's discussion of the impossibility of justifying the logical premises of a theory as the original, historical formulation of the problem. Karl Otto Apel, for example, understands the foundationalist problem in the following Aristotelian and logically deductive terms:

[...] since Descartes, the Aristotelian comprehension of the *axioms* as *immediately apparent fundamental principles* which are neither provable nor in need of proof has been radicalized in the sense of a de-

¹⁴ See A. Long's article, "Aristotle and the History of Greek Scepticism", in D. J. O'Meara (ed.), *Studies in Aristotle* (Washington D. C.: The Catholic University of America Press, 1981), pp. 79-106, in which he reevaluates Aristotle's position with respect to the history of Greek scepticism. Long stresses the metatheoretical nature of the problem thus: "they [Aristotle's opponents] use these strategies [the two modes *eis apeiron* and *ex hypotheseos*] in order to argue against a foundation for knowledge" (p.87) not just against the possibility of S' knowledge *tout court* then, and continues by saying that "It is not difficult to pick holes in Aristotle's answer to his first-line opponent here: the epistemological work he assigns to nous, however we interpret this, is open to the sceptical rejoinder that nous needs a criterion to justify its knowing anything" (*ibid.*). This justified rejoinder seems to undermine any Aristotelian-like approach, cf. Sextus Empiricus' *Against the Dogmatists*, II. 337 and ff..

manded recourse to evidence as the philosophical fundamental-grounding.¹⁵

The Aristotelian reference generally implies an emphasis on the logical nature of the process of justification—above all in terms of the dichotomy deduction vs. induction, as is still the case with Lakatos (see below)—and an interpretation of the essentially problematic nature of the foundationalist issue in terms of the *regressus ad infinitum* instead of the *petitio principii*. It misleads philosophers into

[...] classify[ing] all the various philosophers' analyses or accounts of knowledge as *different reactions to the threatened regress*¹⁶

rather than more correctly to the *diallelus*. We shall also see that, while promoting a more methodological approach to the problem, the Aristotelian perspective has a tendency to pave the way for a hierarchic misplacement of the problem, as if it concerned the justification of first-level, specific instances of knowledge rather than the grounding of the premises of a theory of knowledge at a higher level.

Secondly, it is understandable that in order to have a metaepistemological problem we need to have theories of knowledge at a logically lower level. It is only once Aristotelian *dogmatism* has developed, for example, that the anti-epistemological, sceptical challenge can take place in all its force.¹⁷

Finally, and in this way we are brought back to the historical importance of the *diallelus*, even though it is likely that Sextus Empiricus was referring to previous discussions of metatheoretical objections, we have lost the largest part of Sextus' possible sources and it is he who provides the *Summa* of the sceptical arguments, in-

¹⁵ K. O. Apel, "The Problem of Philosophical Fundamental-Grounding in Light of a Transcendental Pragmatic of Language", *Man & World* 8 (1975), pp. 239-75, quotation from p. 243.

¹⁶ D. M. Armstrong, *Belief Truth and Knowledge* (Cambridge: Cambridge U. P., 1973), p. 153.

¹⁷ Cf. Sextus Empiricus, *Outlines*, I.3.

cluding the metaepistemological one.

A significant example of this traditional attitude is provided by the Neoscholastic philosopher Desiré Mercier. At the beginning of this century he could still refer to the Sextian *diallelus* as the *locus classicus* where the metaepistemological problem had been stated for the first time.¹⁸ We shall now turn to Mercier himself in order to gain more information about the sceptical domain.

2.2. Mercier's *Criteriologie*

The role played by Mercier's *Criteriologie Generale* in the history of our problem is noteworthy, both because of its function in the transmission of the issue (see below) and because it can be taken as an explicit juncture of at least two of the three principal paths followed by the development of the issue: one which goes from Sextus Empiricus via Montaigne to Roderick Chisholm, and one which goes from Sextus Empiricus via Descartes and Gassendi to contemporary discussions of the Cartesian circle and Chisholm again. As for the third line of development—from Sextus Empiricus through Kant, Reinhold and Hegel, ending with Fries' trilemma and its discussion by Karl Popper—Mercier hints at that as well, although more implicitly, in another passage of the *Criteriologie*. For the moment, let us follow the first route through the sceptical domain of our map.

Like a Hellenistic philosopher, Mercier still equates epistemology and criteriology, the latter being "the reflex study of our certain knowledge and of the grounds upon which certitude rests".¹⁹ There-

¹⁸ Cf. D. Mercier, *Criteriologie Generale ou Theorie Generale de la Certitude* (Paris: Louvain, 1906, 5th ed.), p. 59, note 1, where Mercier refers to the *Outlines*, II. 12 and quotes Montaigne's passage given above. Mercier does not specify that the *diallelus* is only part of the argument, no matter how important.

¹⁹ D. Mercier, *A Manual of Modern Scholastic Philosophy*, Eng. tr. by T. L. Parker and S. A. Parker, vol. I: *Cosmology, Psychology, Epistemology*

fore, he has no problems in understanding the appropriate context within which the *diallelus* must be inserted. According to Mercier, criteriology should demonstrate the fallacy of two forms of scepticism: one that casts doubts on each of the acts of the human reason and one that casts doubts on the very possibility of arriving at a knowledge of the truth.²⁰ Thus, the two principal questions confronting a criteriology are:

- a) do we know the truth?
- b) do we have *un instrument judiciaire* (as he says, adopting Montaigne's expression) to distinguish truth from falsehood, i.e. a criterion of truth?

The latter is a *question préjudicielle* presupposed by any study of knowledge. Mercier understands the importance of the problem of selecting a reliable criterion, defined as *le cheval du bataille du scepticisme*,²¹ and its nature, which he identifies as the usual combination of vicious circularity and infinite regress in the process of justification:

But it is impossible, as we have said, to demonstrate everything. As St. Thomas says, a proposition cannot be demonstrated by itself but only by means of another proposition. If not, one of two suppositions would follow, both of which are equally absurd. Either (a) all propositions are linked to another as if in the form of a circle, so that each may be proved by another. Yet a proposition by means of which another is proved ought to be better known than this other. Thus, in this circle each proposition would be at the same time better known and less known than the others. Or else (b) the propositions are united, not in a circle, but in an unlimited straight line. If this were the case, nothing at all could be demonstrated; the conclusions of one demonstration would become certain only when it had been traced back to propositions that

(*Criteriology*) *General Metaphysics (Ontology)*. (London: Kegan Paul, 1917, 2nd ed.), p. 343.

²⁰ Mercier, *Manual*, p. 353.

²¹ Cf. Mercier, *Criteriologie*, pp. 16 and 38. It is noteworthy that on p. 38, note 1 Mercier distinguishes between the *criterium propter quod* we are certain and the *criterium secundum quod* we are certain.

were absolutely certain and had themselves no need of demonstration. Therefore, there could be no satisfaction without going back *ad infinitum*, which is of course absurd.²²

When Mercier comes to qualify the problem, he refers to Sextus' *diallelus*. What is new, in his discussion of the issue, is that he regards Montaigne's *rouet*²³ as another, clever formulation of the same problem of the *cercle vicieux* in which the metaepistemological problem consists:

Montaigne a traduit sous cette forme piquante la même [referring to the *diallelus*] objection.²⁴

2.3. Montaigne's *Rouet*

Like Sextus Empiricus in the *Outlines*, Montaigne had introduced his own version of the metaepistemological problem in *The Apology of Raymond Sebond*. He did this by means of a discussion of the reliability of the senses. He finally formulated the problem thus:

Pour juger des apparences que nous receuons des sujets, il nous saudroit vn instrument iudicatoire; pour verifier cet instrument, il nous y faut de la demonstration; pour verifier la demonstration, vn instrument: nous voila au *rouet*. Puis que les sens ne peuuent arrester nostre dispute, estans pleins eux-mesmes d'incertitude, il faut que ce soit la rai-

²² Mercier, *Manual*, p. 360, note: "Si enim omnia demonstrarentur, cum idem per seipsum non demonstratur, sed per aliud, oportet esse *circulum in demonstrationibus*. Quod esse non potest: quia sic idem esset notius et minus notum. Vel oportet *procedere in infinitum*, sed si in infinitum procederentur, non esset demonstratio; quia quaelibet demonstrationis conclusio redditur certa per reductionem ejus in primum demonstrationis principium: quod non esset si in infinitum demonstratio sursum procederet. Patet igitur quod non omnia sunt demonstrabilia" St. Thomas In XII Met. IV, lect. 6 [my emphasis]".

²³ Cf. Mercier, *Criteriologie*, p. 58, see also note 1 and *Manual*, p. 353.

²⁴ Mercier, *Criteriologie*, p.58.

son; aucune raison ne s'establira sans vne autre raison: nous voyla à reculons iusques à l'infiny.²⁵

Montaigne might have gained his knowledge of the *diallelus* either from Sextus' *Outlines* or from Diogenes Laertius' *Life of Pyrrho*. He did not read ancient Greek very well but both works had been translated into Latin in a single volume by Henri Estienne in 1562 and again in 1569. On the other hand, Montaigne could not have gained such a precise formulation of the *diallelus* from Cicero or Augustine, the other two sources of sceptical topics at his time,²⁶ since none of the five tropes of Agrippa (the *diallelus* or *alternation* included), let alone any combination of them, was discussed in sufficient detail in either the *Academica*²⁷ or *Contra Academicos*.

Montaigne's formulation of the *rouet* is so close to that of the *diallelus*, both in contents and in structure, that we are certainly viewing the same anti-epistemological argument. Indeed, the similarity is so striking and the historical evidence so compelling, that one is lead to subscribe to Mercier's opinion that in fact it may be a simple rewording of the passage in Sextus Empiricus. The hypothesis that Montaigne's *rouet* is both theoretically and historically a

²⁵ Michel Eyquem de Montaigne, *Les Essays*, French ed. by F. Strowski, (Bordeaux: F. Pench & C.ie, 1906-20), vol. II, pp. 12 and 365-6, for an English translation see *An Apology for Raymond Sebond*, translated and edited with an introduction and notes by M. A. Screech (London: Penguin, 1987). According to E. Macu—cf. *Repertoire des Idees de Montaigne* (Geneve: Droz, 1965)—in Montaigne's work there are no occurrences of either "diallelus" or "criterion" and only four occurrences of "rouet". This is confirmed by E. Leake—cf. *Concordance des Essays de Montaigne* (Geneve: Droz, 1981), p. 1110—according to whom there is only one occurrence of "rouet" in the *Essays* connected with the argument of the *diallelus*, which I have quoted in the text. Montaigne hints again at the problem of circularity on p. 280.

²⁶ Cf. C. B. Schmitt, *Cicero Scepticus: A Study of the Academia in the Renaissance* (The Hague: Martinus Nijhoff, 1972).

²⁷ Cf. M. Tulli Ciceronis *Academica*, text revised and explained by J. S. Reid, (London: Macmillan, 1885). Reid gives a proper formulation of the *diallelus* on p. 63.

paraphrase of Sextus' *diallelus* gains further credibility once we notice that, just as the problem of the *diallelus* has to be contextualised within the problem of the criterion, that is *an instrument or means for judging*,²⁸ Montaigne too formulates the problem of the *rouet* by means of the analogical notion of an *instrument judicatorie*. The necessity of a *iudicandi organum*, as Henri Estienne interprets the Greek term in his Latin translation of Sextus' *Outlines*, is a constant theme in the history of the problem of knowledge, and we shall see that it emerges again in all its clarity and force in Hegel's attack on Kant's transcendental criticism.

Even though Montaigne's interests were more ethical and religious than epistemological—in the modern epoch the *diallelus* came to be employed also in favour of religious fideism against the pretences of human knowledge²⁹—his revival of the *diallelus* was destined to play an important role in contemporary epistemology. Also thanks to Mercier's *Criteriologie*, Montaigne's paraphrase of Sextus' *diallelus*, based on the *Outlines*, contributed both to the revival of the question and, probably, to the fact that the problem of the criterion was eventually equated with the specific argument of the *diallelus*. This process of unification has led contemporary epistemologists to understand, by the problem of the criterion, the metaepistemological problem *tout court*, using the expression in a much more restricted

²⁸ According to Striker the word "criterion" was relatively new to the philosophical lexicon around 300 BC. As she says: "The word literally means an instrument or means for judging—which tells nothing about the character or function of such an instrument" ("The Problem of the Criterion", p. 144).

²⁹ For the importance of the problem of the criterion in religious matters, especially Biblical exegesis, see R. H. Popkin, *The History of Scepticism from Erasmus to Spinoza* (Los Angeles: University of California Press, 1979, rev. ed.), O. Frank, *The Criteriologic Problem* (Stockholm: Almqvist and Wiksell Int., 1988) and, from a Popperian point of view, W. W. Bartley III, *The Retreat to Commitment* (London: Chatto & Windus, 1964), especially Chaps. 4 and 5.

sense³⁰ than that adopted by ancient philosophers and therefore by scholars of that period. Roderick Chisholm is an outstanding example of both such influences.

2.4. Chisholm's Problem of Criterion

In an important article, entitled "The Problem of Criterion",³¹ Chisholm has presented the metaepistemological problem by paraphrasing—as he himself acknowledges—Montaigne's *rouet*:

To know whether things really are as they seem to be, we must have a *procedure* for distinguishing appearances that are true from appearances that are false. But to know whether our procedure is a good procedure, we have to know whether it really *succeeds* in distinguishing appearances that are true from appearances that are false. And we cannot know whether it does really succeed unless we already know which appearances are *true* and which ones are *false*. And so we are caught in a circle.³²

Chisholm has analysed the metaepistemological problem as a circle emerging from the answers to two fundamental questions:³³

³⁰ I am not referring to philosophers influenced by Wittgenstein's use of the term. They employ the term "criterion" in a different way, generally intending that if *x* is a criterion of *y* then it is a necessary truth that *x* is evidence for *y*.

³¹ Chisholm's principal analysis of the problem of the criterion is in "The Problem of the Criterion", first published as *The Aquinas Lecture* by Marquette University in 1973 and then reprinted unmodified in R. Chisholm, *The Foundations of Knowing* (Brighton: The Harvester Press, 1982), Part III, Chap. V. More general presentations can also be found in his *Perceiving—A Philosophical Study* (Ithaca-New York: Cornell U. P., 1957), Part I, Chap. III ("The Problem of the Criterion") and in the editions of *Theory of Knowledge* (Englewood Cliffs, N. J.: Prentice-Hall Internationals Editions, 1977, 1989). All references are to the first text.

³² Chisholm, in "The Problem of the Criterion", p. 62 and note 3.

³³ I use the labels (E) for Chisholm's (A) and (C) for Chisholm's (B) to remind us that the former question is about the *extension* of knowledge and the latter question is about *criteria* of knowledge.

E) What is the extent of our knowledges? (what do we know?)

and

C) What are the criteria of knowledges? (How are we to decide whether we know?)

The fork between question E and C constitutes the first problem confronting a theory of knowledge. As he writes:

If you happen to know the answer to the first of these pairs of questions you may have some hopes of being able to answer the second. [...] But if you don't know the answer to the first of these pairs of questions—if you don't know what things you know or how far your knowledge extends—it is difficult to see how you could possibly figure out an answer to the second. On the other hand, if, somehow, you already know the answers to the second of these pairs of questions then you may have some hopes of being able to answer the first. [...] But if you don't know the answer to the second of these pairs of questions—if you don't know how to go about deciding whether or not you know, if you don't know what the criteria of knowing are—it is difficult to see how you could possibly figure out an answer to the first (p.65-66).

It can hardly be doubted that Chisholm's problem of the criterion has a crucial place in the development of the formulation of the meta-epistemological problem. Chisholm acknowledges that reading Mercier's *Criteriaology*³⁴ contributed greatly to his interest in the is-

³⁴ Chisholm, "The Problem of the Criterion", p. 61, note 2. Chisholm refers to the 8th edition. Unfortunately, I have been unable to locate this edition. As specified above, my remarks are based on the 5th. Chisholm, and with him Rescher, also refers to P. Coffey, *Epistemology or the Theory of Knowledge, An Introduction to General Metaphysics* in 2 vols. (first published in New York in 1917 and then in London by Longmans in 1938). Probably influenced by Mercier, Coffey too identifies *diallelus* and *rouet* as the same problem, cf. vol. I, pp. 140-4 and vol. II, pp. 273-4. As for the connection between Chisholm and the German tradition through Nelson, see R. Chisholm, "Socratic Method and the Theory of Knowledge" and the more general paper by R. Haller, "Über die Möglichkeit der Erkenntnistheorie" in P. Schroeder (ed.), *Vernunft Erkenntnis Sittlichkeit*, Int. Phil. Symp. Göttingen 27-29 Okt. 1974 aus Anlass des 50 Todestages von L. Nelson (Hamburg: Felix Meiner V., 1979), pp. 37-54 and pp. 55-68 respectively.

sue, and it is likely that his reference to Montaigne was suggested by Mercier. Chisholm's originality lies not only in the fact that he is one of the few contemporary epistemologists, together with Nicholas Rescher (who has explicitly connected *diallelus* and the foundationalist problem of circularity³⁵), to have recognised the problem of the criterion as

one of the most important and one of the most difficult of all the problems of philosophy³⁶

but also in the fact that he accepts

[w]hat few philosophers have had the courage to recognise [...]: [that] we can deal with the problem only by begging the question.³⁷

According to Chisholm, the sceptical objection is so powerful that the only way to overcome it may be by an equally radical solution, i.e. the admission that in order to start developing any philosophy of knowledge we must presuppose either an answer to (E) or an answer to (C). And since philosophers cannot escape the fundamental circularity implicit in an endless series of requests for justification of premises, on Chisholm's account they can all be divided into two groups:

- i) those who assume some knowledges as good examples of knowledge and then inquire about what kind of features are characteristic of every further instance of knowledge, ending up by

³⁵ Cf. N. Rescher, *Methodological Pragmatism* (New York: New York U. P. 1977), Chap. II. On pp. 17-8 note 6, Rescher mentions Chisholm's paper on the problem of the criterion and Mercier's eighth edition of the *Criteriologie*, specifying that "notwithstanding its intrinsic significance, this line of reasoning [i.e. the problem of the justification of a theory of knowledge] has lain dormant in modern philosophy until D. J. Mercier's *Criteriologie*". Like Mercier, he refers to Montaigne's *rouet*, i.e. Sextus Empiricus' complex argument, by means of the label *diallelus*. See also his *Scepticism* (Oxford: Blackwell, 1980), where Rescher discusses the problem of the *diallelus* (Chap. I) and that of the foundation (Chap. IX).

³⁶ Chisholm, "The Problem of the Criterion", p. 61.

³⁷ *Ibid.*, p. 75.

formulating some criteria to recognise whether or not a certain belief is a real case of knowledge; and

- ii) those who assume some criterion of knowledge and then inquire about which instances of (what we consider) knowledge are really knowledges.

Chisholm calls members of (i) “particularists” and members of (ii) “methodists”. Probably for the sake of a schematic exposition, he considers Locke and Hume (and generally any expression of classical Empiricism) good examples of methodists, while Reid, Moore (and himself) are examples of particularists. At this point, he continues his analysis of the E/C fork by sketching a particularist approach, but since it is not necessary to follow him on this path,³⁸ I shall simply report his concluding remarks:

But in all of this I have presupposed the approach I have called “particularist”. The “methodist” and the “sceptic” will tell us that we have started in the wrong place. If now we try to reason with them, then, I am afraid, we will be back on the wheel. What few philosophers have had the courage to recognise is this: we can deal with the problem only by begging the question. [...] One may object: “doesn’t this mean, then, that the sceptic is right after all?” I would answer: “Not at all. His view is only one of the three possibilities and in itself has no more to

³⁸ Chisholm develops his solution of the Cartesian circle under the label “Critical cognitivism” in *Theory of Knowledge*, second edition, Chap. VII, entitled “The Structure of Empirical Knowledge”. For a critical review of this attempt from the same point of view as this chapter (i.e. the problem of the criterion in connection with the theoretical status of a theory of knowledge) cf. J. P. Dancy, *An Introduction to Contemporary Epistemology* (Oxford: Blackwell, 1985), last chapter entitled “Is Epistemology possible?”. It is interesting to underline that the way Chisholm deals with the so-called sources of knowledge is in terms of possible *criteria* of the encyclopaedia (“an ostensible item of knowledge is genuine if, and only if it is the product of a properly accredited source”, p.122) and therefore as subsequent to the analysis of the extension of knowledges, instead of ways through which knowledge is obtained, and therefore as previous elements whose analysis would eventually be a foundation of complex beliefs on basic beliefs.

recommend it than the others do. And in favour of our approach there is the fact that we *do* know many things, after all.”³⁹

Since Chisholm’s reappraisal of the *diallelus* represents one of the clearest analyses of the topic to have appeared in recent times, it may be worth anticipating here, by way of some critical comments, two questions that will be discussed in the following chapter.

The first point concerns the level at which the sceptical attack is moved. The two terms introduced by Chisholm, namely *particularist* and *methodist*, are meant to label the two possible approaches assumed by a theory of knowledge—which can have as a starting point either some beliefs taken to be knowledges or some criteria whereby beliefs can be selected as being instances of knowledge—but not by the personal attitude of a historical knower. In so far as the two terms describe the nature of a theory there are no difficulties and we can accept Chisholm’s usage, provided that it is made clear that we commonly speak, as Chisholm probably does, of a philosopher’s thought in order to refer to a certain theory. For the sake of simplicity, we often identify what a philosopher has written with what he has in his mind, without even bothering to specify that a logical model of knowledge is no more a personal diary of what has really happened inside a person’s mind than a phenomenological description of the cognitive process carried out by any human brain. Taking into account this convention, we may come across a couple of examples. John Stuart Mill, assuming an empirical criterion of knowledge and being forced to consider mathematics as a significative source of knowledge, ended up by reinterpreting the nature of mathematics in empirical terms. He was a particularist in Chisholm’s terminology. But one could be a methodist as well: the members of the Vienna Circle, facing a similar problem, found a solution by assuming, with Wittgenstein, that logic and mathematics, from an empirical point of view, are not informative sciences, but provide only the formal knowledge of tautologies and rules concerning the uses of

³⁹ Chisholm, “The Problem of the Criterion”, p.75.

symbols. A more ambiguous example is Descartes himself. One may consider him a methodist because of his negative method of excluding from the set of knowledges all doubtful beliefs in order to save the real instances of knowledge; nevertheless, one is forced to acknowledge that he must also be considered a particularist, since it is on a very particular example of a "good belief" (the *cogito*) that he builds his positive criterion of clarity and distinctness for proceeding to acquire further "good beliefs". As I said, problems with Chisholm's dichotomy arise principally when we try to describe, by means of the same terminology, a historical knower and his/her approach to knowledges. In such cases, it seems quite inappropriate to describe someone as either a methodist or a particularist. When we speak of a subject like Mary, for example, I suspect it is far more reasonable to hold that sometimes she assumes what she considers to be genuine instances of knowledge as a ground on which to develop further knowledges of the world, *and* sometimes what she considers to be trustworthy criteria. Seemingly, at the level of the nature of her knowledges, criteria and extension go together and are mutually regulative. As a methodist, Mary may modify her criteria of knowledge more or less whenever she comes across examples of what she does consider proper cases of knowledge. And as a particularist, Mary may also exclude some beliefs from the domain of knowledges, or perhaps modify her conception of their nature, if she considers that opening the way to such beliefs would entail too serious a weakening of the criteria she had obtained on the ground of some other beliefs—for example, if it leads to an endless enlargement of the limits of what she would then be forced to consider genuine instances of knowledge. Only formulated theories are particularist or methodist, not people. Thus only particularist or methodist theories can be seriously challenged by the *diallelus*, not any specific knowing subject such as you or I.

The importance of this distinction of levels will be more fully appreciated in the next chapter, when William Alston's and Karl Popper's approaches to the metatheoretical problem are under

discussion. At the moment, supposing that Chisholm is employing his terminology correctly to refer to the nature of theories, this distinction between the two levels of applicability of the dichotomy would seem rather irrelevant were it not for another particular version of Montaigne's sceptical argument put forward by Chisholm himself in the same article. On p. 66 we find the following reformulation of the *rouet*:

You cannot answer question A [our E] until you have answered question B [our C]. And you cannot answer question B [our C] until you have answered question A [our E]. Therefore you cannot answer either question. You cannot know what, if anything, you know and there is no possible way for you to decide in any particular case [my terms in square brackets].

Unlike Montaigne's version of the sceptical argument, Chisholm's can now be interpreted in two different ways. Depending on which sense we attribute to the statement "you cannot know what, if anything, you know" we can conclude either that:

- i) the sceptical argument claims that our historical knower, that is Mary, does not really know what she believes she knows because, in order to know something she should have some criteria of knowing, but in order to have some criteria of knowing she should already possess a definite understanding of uncontroversial cases of what should count as knowledge. And since in this way she is on the wheel, she cannot know anything at all, including how to start to know something;

or that

- ii) the sceptical argument has an anti-theoretical function and has the same meaning as Montaigne's. It is a theory of knowledge which cannot be formulated because it does not escape the *diallelus* and, strictly speaking, the argument does not say anything about Mary's capacities for reaching some knowledges.

The first version is obviously confusing the two levels of applicability of the particularist vs. methodist dichotomy that I distinguished before. Unless we allow the sceptic to use these two labels to refer

also to Mary's cognitive processes—and we have already seen how this could hardly be the case—the argument does not stand up at all. It does not work simply because we all agree (even the sceptic) on the fact that Mary does enjoy the practice of some cognitive activity. The real problem is how to start making sense of such epistemic activities and of their outcome, with respect both to their references and intellectual environments and to their ends, if, in explaining this—that is, in presenting, on the whole, a logical model of knowledge—we must face the *diallelus* at the level of the possibility of formulating a theory. In brief, what the valid version of the sceptical argument is objecting against is the possibility of a theory of knowledge at all (version ii), not that of the cognitive processes that underlie Mary's knowledges (version i). The latter may be challenged by some other sceptical arguments, and have been, but they are not the target of the present objection. Chisholm himself, in a later answer to Robert Amico's criticisms of his acceptance both of the inevitableness of the *diallelus* and of the necessity to disregard it, has made thoroughly explicit this metatheoretical nature of the problem.⁴⁰ Al-

⁴⁰ Cf. R. P. Amico, "Roderick Chisholm and the Problem of the Criterion", R. Chisholm, "Reply to Amico on the Problem of the Criterion" and R. P. Amico, "Reply to Chisholm on the Problem of the Criterion" all in *Philosophical Papers* 17 (1988), respectively pp. 217-229, 231-4 and 235-6. Chisholm's metatheoretical interpretation is on p. 232. I shall mention here that Amico, in a unpublished paper "Skepticism and the Problem of the Criterion", presented to the 1991 Pacific Division Meeting, has attempted not a descriptive but what I take to be an indirect dissolution of the problem, cf. also his Ph.D. thesis "The Problem of the Criterion" (The University of Rochester, 1986) and now *The Problem of the Criterion* (Lanham: Rowman & Littlefield, 1993), in which he attempts to demonstrate that the sceptic's position is self-undermining. Chisholm's position has been further developed by A. D. Cling, "Posing the Problem of the Criterion", *Philosophical Studies* 75 (1994), pp. 261-292 and by J. Dale, "Knowledge, Skepticism, and the Diallelus", *International Philosophical Quarterly* 34 (1994), pp. 191-198, who analyses Chisholm's particularist proposal and attempts to defend it against the *diallelus* by combining it with Alvin Goldman's non-normative

though he seems to believe that a philosopher (not just his theories) may be a methodist in one epistemological area, a sceptic in another and a particularist in yet another,⁴¹ and although we have seen there are some ambiguities of level in the analysis of the problem owing to his Cartesian perspective, which privileges a subjectivist approach, Chisholm himself has presented the fork between (E) and (C) as constituting the sort of circularity in which a *theory of knowledge* appears to be caught when it is required to justify its own presuppositions, not the beliefs of a single human being.

A second critical comment is now in order. It can be introduced by a remark on Chisholm's use of the expression "problem of the criterion". Since he distinguishes between criteria and extension of knowledge, it is not very clear why the general problem should be labelled simply "the problem of the criterion", while the choice of certain criteria represents only one and not even the principal side of the circularity, since Chisholm describes himself as a particularist. Scholars have brought to light the enormous complexity of issues connected with the problem of the criterion in Sextus Empiricus,⁴² and as I have already remarked, by the label "problem of the criterion" we may refer to a whole set of problems concerning the nature of knowledge, its justification and reliability and the roles of the knower and the known within the process of knowing, not just the

internalism. I shall explain why I believe none of these strategies can be successful in the following two chapters.

⁴¹ Cf. Chisholm, *Theory of Knowledge*, second edition, p.121.

⁴² For a philological analysis of the epistemic lexicon and of the larger and more complex problem of the criterion in Sextus Empiricus cf. K. Janacek, *Sextus Empiricus' Sceptical Methods* (Praha: Univesita Karlova, 1972), especially Chap. IX. More philosophical aspects of the text are discussed by Long in his "Sextus Empiricus on the Criterion of Truth" and by J. Brunschwig in "Sextus Empiricus on the kriterion: the Skeptic as conceptual legatee", in J. M. Dillon and A. A. Long (eds.), *The Question of "Eclecticism" in Later Greek Philosophy* (Berkeley and Los Angeles: University of California Press, 1988), Chap. VI.

methodological problem as this is summarised in the *diallelus*.⁴³ The fact that Chisholm had already discussed elsewhere *Against the Dogmatists*⁴⁴—the work where Sextus Empiricus gives the fullest and almost certainly latest account of the problem of the criterion⁴⁵—suggests that he must have been aware that the expression “problem of criterion” covered a much wider area of issues in Sextus than it seems to in the passage from the *Outlines* quoted above and paraphrased by Montaigne. This induces one to conclude that, by adopting the expression “the problem of the criterion” to define the problem of the justification of a theory of knowledge, Chisholm might have intentionally accepted a distinction between methodological problems concerning the status of epistemology and its tasks, on the one hand, and theoretical problems concerning the nature of knowledge *tout court* on the other—a distinction whose sharpness, at least, was unknown to Sextus—and opted for a more restricted use of the label in order to refer only to the former. In so doing, he might have been influenced by Coffey’s and Mercier’s Kantian approach to the issue, in terms of an analysis of the conditions that make a certain discipline possible, and perhaps implicitly by Mercier’s interpretation of Montaigne’s *rouet*. What is certain is that, thanks to Chisholm’s clear analysis, the metaepistemological problem finally acquires complete autonomy with respect to the epistemological questions concerning the nature of human knowledge.

3. The Cartesian Domain: Descartes’ Circle

Classical scepticism had elaborated the arguments summarised by

⁴³ See Sextus Empiricus’ *Against the Dogmatists* VII. 27-446 and *Outlines*, II. 13-79.

⁴⁴ See R. Chisholm, “Sextus Empiricus and Modern Epistemology”, *Philosophy of Science* 8 (1941), pp. 376-84. Note that the paper contains no reference to the problem of the criterion or to the *diallelus*.

⁴⁵ See Long, “Sextus Empiricus on the Criterion of Truth”, especially p. 35.

Sextus in the *Outlines* in opposition to Aristotelian and Stoic foundationalist approaches to the theory of knowledge. It is therefore not surprising that similar arguments, and especially the *diallelus*, should be used by later critics to oppose new forms of epistemological dogmatism, when these appeared again. The first case to be discussed is Descartes'.

Chisholm suggests that the problems implicit in the E/C bifurcation are clearly exemplified by the kind of difficulty confronting the Cartesian attempt to discover a firm foundation for human knowledge. The observation is not new. On p. 82 of his *Criteria*, in relation to the *diallelus* and the *rouet*, Mercier stresses the *cercle vicieux* in which Descartes seems to be caught in his *Meditations*. As James Van Cleve has precisely summarised it

The problem of the Cartesian circle arose for Descartes because [in the *Meditations*] he appeared to commit himself to each of the following propositions: (1) I can know (be certain) that (p) whatever I perceive clearly and distinctly is true only if I first know (am certain) that (q) God exists and is not a deceiver. (2) I can know (be certain) that (q) God exists and is not a deceiver only if I first know (am certain) that (p) whatever I perceive clearly and distinctly is true. Obviously, if (1) and (2) are both true, I can never be certain of either p or q. To be certain of either I would already have to be certain of the other.⁴⁶

The charge of circularity too is an old one. It was first brought against Descartes by some theologians through Mersenne's compilation of the second set of objections, by Arnauld (fourth set) and by Gassendi (fifth set), with various degrees of strength and lucidity, already in the first edition of the *Meditations*, issued together with the *Objections* in 1641.⁴⁷

⁴⁶ J. Van Cleve, "Foundationalism, Epistemic Principles, and the Cartesian Circle", *Philosophical Review* 88 (1979), pp. 55-91, esp. 55-56.

⁴⁷ Cf. *Meditationes de Prima Philosophia*, vol. VII of *Oeuvres de Descartes*, ed. by C. Adam and P. Tannery, (Paris: L. Cerf, 1904), henceforth referred to as "AT", respectively, pp. 124²⁹ and ff., 214⁷⁻¹⁰ and 326¹⁶⁻¹⁹. It is worth noting that P. Carabellese attempted a diversification of what seemed to him three versions of the same objections in "Il circolo vizioso di Carte-

The connection between the *petitio principii*, in which Descartes' foundationalism seemed to be caught, and the sceptical argument which hinges on the *diallelus* was likewise soon detected.⁴⁸ Gassendi, for example, who was an expert in sceptical literature and not adverse to a form of mitigated scepticism himself, had formulated his version of the argument in the *Obietiones* in very general terms. But when, in 1644, he wrote the *Disquisitio Metaphysica*, a lengthy work opposing the Cartesian project of first philosophy, he did not have any doubt in classifying the Cartesian circle technically as a *diallelus*:

Then I ask whether or not you are arguing in a circle, as they say, falling into a *diallelus* [*in diallelum incidas*], and begging the question when you prove one proposition by another which cannot itself be proven except by assuming that the first one has been proven.⁴⁹

In the *Meditations* Descartes was in need of a first indubitable extension of knowledge in order to be able to prove the existence of God, but required the existence of God as a metaphysical principle in order to prove that a first indubitable extension of knowledge was

sio", *Rendiconti della Classe di Scienze Morali, Storiche e Filologiche della Reale Accademia dei Lincei*, Sez. VI, Vol. 13, fasc. 11-12 (1939), pp. 471-532.

⁴⁸ From a lexical point of view, in the *Meditations* and the *Objections* the problem is always discussed in terms of a *circulus*, cf. Arnauld's objection and Descartes' answer to the fourth set of objections in AT, VII, pp. 245²⁵-246⁹ and also 210. The objection came to be known as Arnauld's circle, and it is so described by Bayle in his dictionary.

⁴⁹ Cf. P. Gassendi, *Disquisitio Metaphysica seu Dubitationes et Instantiae adversus Renatii Cartesii Metaphysicam et Responsa*, ed. by B. Rochot, (Paris: Vrin, 1962), *Contra Med. IV, Doute IV, Inst. II*, p. 465. The work has been reprinted in *Opera Omnia*, Faksimile-Neudruck der Ausgabe von Lyon 1658 in 6 Banden mit einer Einleitung von T. Gregory (Stuttgart-Bad Cannstatt: Frommann, 1964), vol. III. The Eng. tr. is from *The Selected Works of Pierre Gassendi*, ed. and tr. by C. B. Brush, (New York: Johnson Rep. Corp., 1972), p. 242. Oddly enough the index of this collection does not record this occurrence of the word "diallelus", but see next footnote.

possible.⁵⁰ It is a problem we shall encounter several times in the following chapters.

Gassendi was probably led to recognise a correspondence between the objection of circularity against Descartes and the charge of circularity moved by Sextus Empiricus against the dogmatist, by his tendency to assimilate Cartesian metaphysics to the one proposed by Scholastic-Aristotelian philosophy, and hence to consider Descartes as a new dogmatist against whom the sceptic should renew his attack.⁵¹ He interpreted Descartes' justificationism as an attempt to provide a new first philosophy that could be a point of departure for any future development of human knowledge. Hence, his more instrumental vision of human knowledge led him to attack the Cartesian certainties with the same weapons elaborated centuries before by Agrippa, for what he thought were very similar purposes. By adopting the *diallelus* in order to level a charge of *petitio principii* against Descartes' treatment of the relation between the *cogito* and the proof of the existence of a veridical God, not only was Gassendi influenced by Sextus Empiricus and Montaigne; he was also addressing the issue by means of two classic dichotomies—dogmatism vs. scepticism (or criticism) and justificationism vs. descriptivism—which have come to represent two constants in the historical development of the debate.

All this, however, does not mean that Gassendi's identification of the Cartesian circle with the *diallelus* was merely due to his philosophical perspective. The same equivalence "*diallelus* = Cartesian circle" could also be endorsed both by the conservative party, which opposed Descartes' foundationalism by means of the same argument,

⁵⁰ Gassendi knew very well the technical meaning of the term, as attested in his *Syntagmatis Philosophici Pars Prima quae est Logica*, vol. I of *Opera Omnia*, where the *diallelus* is defined on p. 75^b and used as a technical term e.g. on pp. 75-86, esp. p. 85^b. See also *The Selected Works of Pierre Gassendi*, pp. 312 and 345.

⁵¹ Cf. T. Gregory, *Scetticismo ed Empirismo, Studio su Gassendi* (Roma-Bari: Laterza, 1961), pp. 82-118.

and finally by the defenders of Cartesianism themselves. A clear example is provided by the debate between Pierre-Daniel Huet and Johannes Schotanus. After a short period of Cartesianism, Huet had become more sceptical about the validity of human knowledge. When he began to stress its limitation compared with the possibility of religious faith, he came to endorse a position similar to Gas-sendi's: Descartes' metaphysics was caught in a

“*diallelimson* [sic], or as they say in the School, a *petitio principii*”.⁵²

In his answer to Huet, Schotanus did not question the equivalence “*diallelus* = Cartesian circle”. He accepted that the circle would have been a *diallelimson* a(sic) and an *asylloghison* (sic), but challenged the claim that Descartes had been caught in a *diallelus* at all.⁵³ Contemporary epistemologists have been equally convinced that the Cartesian circle is another instance of the more general, metaepistemological problem sketched by Sextus in the *diallelus*.⁵⁴ Kenneth R.

⁵² P. D. Huet, *Censura Philosophiae Cartesianae* (Paris 1689), pp. 134-5. A reproduction of a first edition printed by Kampen in 1690 has been provided by G. Olms (Hildesheim, New York: 1971). On Huet's interpretation of the *diallelus* and the problem of the criterion, see his *Traité philosophique de la faiblesse de l'esprit humain* (Amsterdam, 1723, repr. Hildesheim, New York: G. Olms, 1974), pp. 52-58 and 69-74.

⁵³ *Johannis Schotani Discussio Censurae Huetianae. Qua scilicet Illustrissimus ille praesul Pet. Daniel Huetius [...] Philosophiam, quam vocat, Cartesianam inique vexavit, editio altera [...] cum Prefatione Jacobi Roman* (Amsterdam 1702), cf. pp. 305-7. For more information on this Dutch Cartesian philosopher [1643-1699], see A. J. Van der AA, *Biographisch Woordenboek der Nederlanden* (Harlem: J. J. van Brederode, 1874), vol. 17, pp. 439-40. The date of the first edition of the *Discussio* reported on p. 440 of this work, namely 1591, is obviously a misprint and should be interpreted as standing for 1691.

⁵⁴ Two interpreters who see the Cartesian Circle as metatheoretical issue are R. Cummins, “Epistemology and the Cartesian Circle”, *Theoria* 40 (1974), pp. 112-124 and F. Feldman, “Epistemic Appraisal and the Cartesian Circle”, *Philosophical Studies* 27 (1975), pp. 37-55. H. Zellner, “The *Cogito* and the *Diallelus*”, *History of Philosophy Quarterly* (1991), pp. 15-25 defends the hypothesis that in the *Meditations* Descartes means to deal both

Westphal,⁵⁵ for example, has implicitly endorsed Gassendi's suggestion by referring to the same lines from Sextus' *Outlines* quoted above as the original source of the Cartesian foundationalist problem. And in an article on the problem of epistemic circularity, William Alston has referred to Van Cleve's work on the Cartesian circle as a more scholarly analysis of the same problem;⁵⁶ Van Cleve, in his turn, referred to Chisholm's article as a more analytical version of the Cartesian circle itself.⁵⁷ We have seen that Chisholm's *problem of the criterion* is a paraphrase of Montaigne's *rouet* and this, in its turn, is a rewording of Sextus Empiricus' *diallelus*.

Ever since the publication of the *Meditations*, the Cartesian circle and its conceivable solutions have been the subject of a huge volume of analysis and controversy. A recent survey listed up to 58 works published between 1960 and 1984 dedicated to the problem of circularity in Descartes.⁵⁸ Generally speaking, interpreters can be divided

explicitly and successfully with the problem of the criterion, as it appears in Sextus Empiricus. As far as the continuity of the problem of the criterion is concerned, R. A. Imlay, "Descartes, Montaigne, Beyssade et le Critere de Verite", *Studia Leibniziana* 18 (1986), pp. 52-59, has defended Descartes' criterion of truth from the twofold charge of vicious circularity and an infinite hierarchy of criteria, aiming to show that Descartes is able to solve the classic problem already present in Montaigne.

⁵⁵ K. R. Westphal, "Sextus Empiricus contra Descartes", *Philosophy Research Archives* 13 (1987/8), pp. 91-128. Westphal lists five different forms of circularity in Descartes' *Meditations*. See also C. Hookway, *Scepticism* (London: Routledge, 1990), pp. 66-7.

⁵⁶ W. P. Alston, "Epistemic Circularity", *Philosophy and Phenomenological Research* 47 (1986), pp. 1-30, see note 16, p. 13 and above all his quotation (p. 148) of Sextus Empiricus' *diallelus* from *Outlines*, II. 20 in "Level-Confusions in Epistemology", in P. A. French, T. E. Uehling and H. K. Wettstein (eds.), *Midwest Studies in Philosophy: Studies in Epistemology* 5 (1980), pp. 135-150.

⁵⁷ Van Cleve, "Foundationalism, Epistemic Principles, and the Cartesian Circle", p. 56, note 2.

⁵⁸ V. Chappell and W. Doney (eds.), *Twenty-five Years of Descartes Scholarship 1960-84* (New York: Garland, 1987). Note, however, that not all the works listed under the topic "circularity" are strictly relevant to the

into two parties. One party is convinced that, to quote A. K. Stout,

[the] circle [was] so obvious that it could hardly have escaped the notice even of a mind far less subtle than his [Descartes']⁵⁹

and inclines either towards a possible solution of the circle within the Cartesian system or towards a dramatic reinterpretation of Descartes' aims, arguing, for instance, that the circle is part of an elaborate deception aiming at the implicit justification of atheism and materialism. The other party believes that, to adapt a phrase from Montaigne,

there is no human mind, no matter how alert, that does not sleep sometimes⁶⁰

and asserts that the circularity between the *cogito* and the existence of God shows the full inadequacy of Descartes' approach. The anti-Cartesian tradition is rich in examples of this attitude. When, after about 1670, the popularity of Cartesianism in England had begun to decline, British philosophers were ready to adopt the Cartesian circle as one of the emblems of the anti-Cartesian reaction. Ralph Cudworth, the Cambridge philosopher who contributed so much to this

problem of the Cartesian circle. Doney has published a useful collection of some important essays on the Cartesian circle, entitled *Eternal Truths and the Cartesian Circle* (New York & London: Garland Pub. Co., 1987). According to Doney (see his "The Cartesian Circle") Descartes' "metaphysical doubt" concerns memory and not reason and hence the former should not be accused of attempting the impossible task of justifying reason by appealing to a veridical God, but H. G. Frankfurt, "Memory and the Cartesian Circle", *Philosophical Review* 71 (1962), pp. 504-511, has shown the inconsistency of such an interpretation.

⁵⁹ A. K. Stout "The alleged 'petitio principii' in Descartes' appeal to the veracity of God", *Proceedings of the IX Congress International de Philosophie* (Paris: 1937), vol. I, pp. 125-31. The point could be reinforced by the fact that, according to R. Popkin, Descartes was able to adopt a very similar strategy against Herbert of Cherbury, accusing him of vicious circularity in a letter to Mersenne cf. *The History of Scepticism from Erasmus to Spinoza*, p. 160, esp. note 35.

⁶⁰ Montaigne, *Apology*, p. 285.

reversal of fortunes, used the charge of *petitio principii* to undermine the Cartesian project. He thought that the circle was

a gross oversight, which the aforementioned philosopher [i.e. Descartes] seems plainly guilty of.⁶¹

From a different (because more sceptical) position, Thomas Baker reached the same conclusion.⁶² So it is understandable that, in more recent times, an anti-Cartesian like Peirce should be ready to accuse Descartes of *petitio principii* in the same way.⁶³

If I have mentioned the previous alternatives this is not because I mean to enter now into a detailed discussion of the solutions to the problem. Rather it is because I would like to conclude the description of the Cartesian domain by some comprehensive remarks on the possibility of solving the Cartesian circle in principle, on the basis of its nature as a general problem. Again, this is a question which will have to be addressed in greater detail in the next chapter, but it is worth introducing it here in outline.

⁶¹ Cf. R. Cudworth, *The True Intellectual System of the Universe* (London, 1678). The quotation is from vol. III, p. 31, of the 1845 edition, London. It is interesting to note that this edition originates from the Latin edition prepared by John Laurence Mosheim in 1733. Mosheim had added numerous notes and an appendix. In his fifth note to the text quoted above he agrees with Cudworth's judgement about the Cartesian circle. He refers to Gassendi's *Disquisitio Metaphysica* as the clearest place where the objection is first formulated and to Pierre de Villemandy's *Scepticismus Debellatus* (Lugduni Batavorum, 1697). The latter reference is to Chap. II esp. p. 9, but the Cartesian circle can be found discussed at greater length in Chap. VI, where Villemandy in turn refers to Huet's *Censura*—but interestingly not to Schotanus' counter-attack on Huet—and to Gassendi.

⁶² Cf. his *Reflections upon Learning, wherein is shown the insufficiency thereof in its several Particulars. In order to evince the Usefulness and Necessity of Revelation* (London, 1699), pp. 59-60. This work, which was a classic combination of scepticism and fideism, was so successful as to merit several editions (the eighth and last, contained in the Bodleian Library, Oxford, is dated 1756).

⁶³ Cf. C. S. Peirce, *Collected Papers of C. S. Peirce*, ed. by A. W. Burks, in VIII vols. (Cambridge: Harvard U. P., 1958), 2.28.

The strict relation between *diallelus*, the problem of the criterion and the Cartesian circle suggests that, if we accept—as I think we should—Van Cleve’s interpretation of Chisholm’s article as a more analytic treatment of the same topic and—although I acknowledge this may be more controversial—Chisholm’s conclusion that the problem of the criterion is an inevitable and insoluble quandary in which any epistemology will necessarily be caught, we should also conclude that the Cartesian circle, in so far as it is a specific case of a more *general* issue, is equally insoluble. By this, I do not mean to say that the Cartesian circle, as a *specific* issue, may not be solved by maintaining unchallenged certain presuppositions present in the Cartesian system. Van Cleve himself, Anthony Kenny and Bernard Williams, for example, have all proposed interesting approaches to the problem, by interpreting it in the context of Descartes’ thought.⁶⁴

⁶⁴ A. Kenny has presented his interpretation in *Descartes: a Study of His Philosophy* (New York: Random House, 1968; rep. Bristol: Thoemmes Press, 1993), which is further expanded in A. Kenny, “The Cartesian Circle and the Eternal Truths”, *Journal of Philosophy* 67 (1970), pp. 685-700. Kenny has been criticised by D. Odegard, “Escaping the Cartesian Circle”, *American Philosophical Quarterly* 21 (1984) pp. 167-174, according to whom defences of the Cartesian solution internal to Descartes’ system, such as Kenny’s and Frankfurt’s, are in any case unsatisfactory from an external perspective, since the Cartesian circle remains a problem which requires a weakening of the notion of knowledge (I shall argue later in the book that what is required is a transformation in the notion of justification). Further criticisms have been made by F. Feldman and A. Levison, “Anthony Kenny and the Cartesian Circle”, *Journal of the History of Philosophy* 9 (1971), pp. 491-496, to whom Kenny has replied in “A Reply by Anthony Kenny”, *Journal of the History of Philosophy* 9 (1971), pp. 497-8, arguing that it is never the case in Descartes that there is a proposition which is at the same time both perceived and suspected to be false, so that simple axioms cannot be doubted in any way which involves adverting to their content. Kenny acknowledges however that even proof of a veridical god is not sufficient for certainty and that though Descartes’ epistemology is not circular, it is none the less inadequate. B. Williams has provided his interpretation of the Cartesian circle in his *Descartes: the Project of Pure Enquiry* (Harmondsworth:

Nor do I mean to say that the *diallelus* would be as formidable an obstacle for an approach different from the Cartesian combination of justificationism and foundationalism. It is worth noticing, for example, that Ralph Walker⁶⁵ has traced back to Gassendi's anti-dogmatism, in terms of anti-Cartesianism and anti-foundationalism, contemporary tendencies in epistemology like Quine's naturalised epistemology which are (or should be, see what Walker says on pp. 331-2) characterised by a non-normative and purely descriptive approach to the investigation of knowledge. Although I would be reluctant to advocate such a form of descriptivism—for I agree with the criticisms raised against it by Barry Stroud and by Chisholm himself, who has employed the argument of the *diallelus* against a descriptive programme of research à la Goldman (see chapter seven)⁶⁶—philosophers may expect from this approach solutions, or perhaps dissolutions, of the metaepistemological problem. What I mean is that, given that Chisholm's work has commonly been interpreted as the continuation of the Cartesian project, his acceptance of the insolubility of the problem calls into question the whole enterprise of providing a firm, conclusive foundation for a Cartesian-like theory of knowledge in terms of an ultimate, sceptic-proof justification of the

Penguin, 1978) and has been criticised by A. C. Stubbs, "Bernard Williams and the Cartesian Circle", *Analysis* 40 (1980), pp. 103-108.

⁶⁵ R. Walker, "Gassendi and Skepticism", in M. Burnyeat (ed.) *The Skeptical Tradition* (Berkeley, Los Angeles, London: University of California Press, 1983), pp. 319-336.

⁶⁶ Cf. B. Stroud, "The Significance of Naturalized Epistemology" in P. A. French, T. E. Uehling and H. K. Wettstein (eds.), *Midwest Studies in Philosophy: The Foundations of Analytic Philosophy* 6 (1981), pp. 455-471, revised in *The Significance of Philosophical Scepticism* (Oxford: Clarendon Press, 1984) and Chisholm, *Theory of Knowledge*, 2nd ed., p. 123. See also Sextus Empiricus, *Outlines*, II. 48-56 and *Against the Dogmatists*, I. 426-430. On Goodman's *descriptive turn* cf. D. Christie, "Contemporary 'Foundationalism' and the Death of Epistemology", *Metaphilosophy* 20 (1989), pp. 114-126. Chisholm's and Pollock's approaches, in favour of an *analytic, explanatory* task of epistemology, are more critical-normative than Goldman's.

premises on which that very theory should be based. At least, philosophers who would like to solve the Cartesian circle, not only for the sake of scholarly interpretation but also with an eye to the foundationalist project, should first attempt to solve Chisholm's more analytic version of the problem of the criterion. For if it is to Descartes' credit that he advanced so far into the problem of the justification of knowledge that he came up against the *diallelus*, it is to Chisholm's credit that he has recognised the serious difficulties that the *diallelus* represents for any form of Cartesian justificationism.

4. *The Kantian Domain*

After Descartes' internal justificationism, Kant's transcendentalism represents the other principal attempt in modern times to provide a firm ground for the validity of human knowledge. It is from the discussion of Kant's epistemology that we shall start our investigation of the third domain on our map. So let us once more turn to our guide.

Mercier alludes to the problem of the *diallelus* in Kant's philosophy on pp. 403-4 of the *Criteriologie*. Within his discussion of the vicious circularity of the idealistic formulation of the problem of internal certainty, Mercier hints at the metaepistemological problem by remarking, with respect to the possibility of a pure investigation of the conditions which make knowledge possible, that:

[...] it is virtually impossible to judge of the capacities of the intellectual faculty [*intelligence*] without using it.

This time the charge of *vicious circularity* is levelled at the project of a critique of pure reason, which would implicitly presuppose the right use of the "instrument" whose reliability it is supposed to assess. Mercier refers the reader to paragraphs 23 and 24 of his work, where he had originally discussed Descartes' foundationalism. However, it is preferable to approach the new issue by tracing the origin of Mercier's anti-transcendental objection to its Hegelian roots, for

this will lead us to the contemporary, renewed interest in the meta-epistemological problem under the name of Fries' trilemma.

4.1. Reinhold's Elementarphilosophie

One of Kant's principal aims, in the first *Critique*, was to examine the conditions which make human knowledge possible, in order to determine the limits within which the latter could be expected to be reliable, cumulative and therefore scientific. Unlike Descartes, however, Kant was urged to pursue such an investigation not so much by a straightforward, foundationalist project, and therefore by a deep concern for the sceptical challenge, as by his interest in the status of metaphysical claims and religious beliefs. As a consequence, Kant's faith in sciences like physics and mathematics appears never to be shaken in the *Critique*. Such disciplines represent the standards of what may count as scientific knowledge and, whilst the possibility of their epistemic achievements may be in need of an explanation, their epistemological validity remains unquestioned. They provide the basis on which other possible instances of knowledge are to be assessed. The question addressed by the *Critique* is how knowledge is possible; that we do know is taken as a fact.

Owing to his limited concern with scepticism, Kant did not dwell on the following questions: what type of knowledge was to be found in the *Critique itself* (was it metaphysical or empirical or transcendental or of some other type?); was that type of knowledge in need of justification; and, if so, could it be justified without incurring a vicious circle and how? The discussion of such issues, however, was urged upon Kant himself, and then upon the Kantian school, almost immediately and ended in the formulation of Fries' famous trilemma. The crisis was provoked internally by an admirer of Kant's criticism, Karl Leonard Reinhold, and brought to its disruptive maturity by Hegel.

In 1791, only four years after the publication of the second version of the *Critique*, Reinhold had already contributed a sound

analysis of the foundationalist problem which was threatening the *Critique*:⁶⁷

The *foundation* of the *Critique of Pure Reason* is neither *universal* (i.e. all-encompassing) enough nor *firm* enough to carry the *whole philosophical edifice* of philosophy. [...] for however *true* all that the *Critique* presupposes as *established* regarding its own groundwork (or all that on which it actually erects its edifice) may be, it is equally true that none of it HAS BEEN ESTABLISHED as *true*. The concepts of the *possibility of experience* and of the *nature and actuality of synthetic a priori judgements*, which are laid down in the *Critique* as the foundation of the edifice of Kantian doctrines, are assumed in this founding function without any proof. [...] Of course, the essential characteristics of these important concepts are unfolded and demonstrated throughout the work, but only on the basis of grounds that *presuppose* the Kantian foundation of the *Critique*—hence the reality of concepts at issue (or rather, the unproved assertions, the incomplete principles, in which those concepts are laid down as foundation) is *presupposed*. The foundation of the *Critique* can only be proven from the *Critique* itself via a vicious circle.⁶⁸

Reinhold's criticism turned out to be a case of "friendly fire". He had

⁶⁷ Cf. K. L. Reinhold, *Über das Fundament des philosophischen Wissens*, (Jena, 1791). Page numbers are from the Eng. tr. *The Foundation of Philosophical Knowledge*, a substantial excerpt published in G. Di Giovanni and H. S. Harris (eds.) *Between Kant and Hegel, Texts in the Development of Post-Kantian Idealism* (New York: Suny Press, 1985), pp. 54-103 (note that the date of publication reported on p. 53 is 1794 but should be 1791 as stated on p. 52 and in the bibliography). On Reinhold's philosophy see D. Breazeale "Between Kant and Fichte: Karl Leonard Reinhold 'Elementary Philosophie'" *Review of Metaphysics* 32 (1982), pp. 785-822. For more information about the post-Kantian works and the authors discussed here see the critical apparatus of the anthology, especially the essay by G. di Giovanni "The Facts of Consciousness", pp. 2-50. I found particularly useful V. Verra, *Dopo Kant, Il Criticismo nell'Età Pre-romantica* (Torino, 1957) and F. C. Beiser, *The Fate of Reason, German Philosophy from Kant to Fichte* (Cambridge Mass.: Harvard U. P., 1987).

⁶⁸ Reinhold, *The Foundation of Philosophical Knowledge*, pp. 92-3. Only the square brackets are mine, capitals and italics are in the text.

raised the foundationalist issue in relation to the premises of the *Critique* itself because he meant to reinforce the validity of Kant's approach by providing an *Elementarphilosophie* which would have established what the *Critique* was *correctly* presupposing, namely a theory of representation based on the individuation of a pure fact of consciousness. In fact, the crisis triggered by Reinhold could only lead either to a revival of the Cartesian project for the individuation of the self-evident, i.e. for the identification of an extension of knowledge which could justify the rest of the edifice without requiring further foundation, as the neo-Kantian Leonard Nelson clearly realised years later,⁶⁹ or to the idealist attempt to get rid of the foundationalist program in terms of justificationism. In a short time, the latter prevailed as the leading programme of research. Like Descartes' critics, Reinhold had to admit that, if the issue of the justification were pursued to its extreme, the appeal to a pure fact of consciousness would also incur a *petitio principii*.⁷⁰ He had to recognise that, once the nature of the sceptical challenge was transformed into a source of logically possible objections, his fact of consciousness, i.e. his fundamental proposition "in consciousness the

⁶⁹ L. Nelson, *Progress and Regress in Philosophy, From Hume and Kant to Hegel and Fries*, ed. by Julius Kraft, Eng. tr. by Humphrey Palmer, (Oxford: Blackwell, 1971), vol. II, p. 41 and ff. Despite his attempts, Nelson's approach to the problem—the *Critique* is the place where the facts of consciousness are presented as, not allegedly justified in terms of, psychological certainty—did not free himself of the subjectivist, if not psychologistic, tendency implicit in the Cartesian twist that Reinhold gave to the problem of the foundation. In particular, the notion of immediate knowledge not requiring justification—which he takes from Fries—leaves unanswered the metatheoretical question about the justification of its assumption. The problem is not, given that there is immediate knowledge, how we can justify the rest of our knowledge, but rather whether or not we are justified in assuming that there is immediate knowledge. For an analysis of the key concept of non-intuitive and yet immediate knowledge in the Friesian school see K. I. Ross, "Non-intuitive Immediate Knowledge" *Ratio* 29 (1987), pp. 163-179.

⁷⁰ Cf. Reinhold, *The Foundation of Philosophical Knowledge*, pp. 66-67.

representation is distinct from both subject and object, and refers to both", could not provide a solution any less circular than the Cartesian *cogito*.⁷¹ Philosophers of the time had already been forcefully reminded of this, in Humean terms, by Gottlob Ernst Schulze, who had moved the charge of circularity against Reinhold in his *Aenesidemus*.⁷²

Reinhold's failure contributed to an internal shift in post-Kantian philosophy. If it was not possible to provide a conclusive, Cartesian-like justification of human knowledge, the alternative was the idealistic one of the absolute foundation of knowledge on the noetic activity of the transcendental subject. In the *Science of Knowledge*,⁷³ Reinhold's objection to the *Critique* led Fichte to accept both the requirement for a final, internal foundation of the Kantian system and the inevitability of the circularity of the foundation of a theory of knowledge. All he could do was to try to transform it into the virtuous circle of a transcendently subjective, self-foundation of knowledge.

4.2. Hegel's "Scholasticus' absurd resolution"

With Fichte, the attack on the justification of the *Critique* reached its furthest development within Kantian co-ordinates. Fichte could still consider himself a follower of Kant, no matter how rebellious. Hegel, however, adopted the charge of a vicious circle as one of the principal means to unhinge Kant's criticism, dispose of its epistemological dualism together with the consequent limits of reason,

⁷¹ Cf. Nelson, *Progress and Regress in Philosophy*, vol. II, p. 52.

⁷² Cf. his *Aenesidemus, oder über die Fundamente der von dem Herrn Prof. Reinhold in Jena gelieferten Elementarphilosophie, nebst einer Verteidigung gegen die Anmaassungen der Vernunftkritik*, 1792, partially translated in G. Di Giovanni and H. S. Harris (eds.) *Between Kant and Hegel*, pp. 104-135, especially pp. 111 and 128-9.

⁷³ Cf. Fichte, *The Science of Knowledge* (Cambridge: Cambridge U. P., 1982), p. 93 and ff..

and hence vindicate the systematic and constructive speculation of the latter. With Hegel, the stress on the crisis of the foundation became part of the larger, external attack launched against Kant's transcendental idealism by its rival philosophy, absolute idealism.

Unlike Descartes and Kant, Hegel approached the problem of knowledge more in terms of a descriptive explanation than in terms of a normative justification. For Hegel, the justificatory function of the descriptive explanation was to be detected in the articulated exhaustiveness of the complete system. In line with the Cartesian tradition, Hegel did not share Kant's restricted conception of scepticism. This is already clear in "On the Relationship of Scepticism with Philosophy",⁷⁴ an early review of Schulze's *Kritik der teoretischen Philosophie* written in 1802, in which Hegel discusses the *Aenesidemus* at length. It is in this early work that we find the roots of the revival of the metaepistemological problem within the German tradition, as Hegel interprets ancient scepticism, in its more positive form, as the driving force of theoretical investigation.

Like Gassendi with respect to Descartes, Hegel moves his anti-foundationalist criticism against Kant's criticism following the classic dichotomy between scepticism and dogmatism. While discussing Schulze's *Aenesidemus*, he assimilates the *new* Scepticism to the Kantian "intellectualist system".⁷⁵ They are both manifestations of the philosophy of finitude, which rely especially on physics and mathematics as the typical sciences in which dichotomies and oppositions are unresolvable.⁷⁶ Both philosophies dissect the rational, in which being and thinking are one, into a dualist opposition of being and thought, which they then maintain are steadily fixed and

⁷⁴ G. W. F. Hegel, "On the Relationship of Scepticism with Philosophy" in *Samtliche Werke*, ed. by H. Glockner, (Stuttgart: 1927-40), vol. I, pp. 215-75. Eng. tr. in G. Di Giovanni and H. S. Harris (eds.) *Between Kant and Hegel*, pp. 311-62. Page numbers in the text refer to the English translation.

⁷⁵ Hegel, "On the Relationship of Scepticism with Philosophy", p. 340-1.

⁷⁶ *Ibid.*, p. 336.

radically irresolvable.⁷⁷ As “intellectualist philosophies”, both Kant’s criticism and Schulze’s scepticism are forms of dogmatism which can be dislodged by dialogical questioning of the old scepticism. In particular, Hegel is convinced that “there are no better weapons against dogmatism on a finite basis” (p.335) than Agrippa’s second and fourth tropes, and especially the *diallelus*. According to him the *diallelus* shows that, as long as there is an irreducible relation-dichotomy between finite and infinite, thought and being, absolute and limited, there is also the metaepistemological problem of the circularity of the foundation of a philosophy of knowledge.⁷⁸

Of the various places in which Hegel reiterates his attack on Kant’s criticism, the *Phenomenology of Spirit* and the *Encyclopaedia of the Philosophical Sciences* are the most interesting for our present reconstruction.⁷⁹ In the former, Hegel further develops his critique of

⁷⁷ *Ibid.*, p. 339.

⁷⁸ It is interesting to note that K. R. Westphal begins his “Hegel’s Solution to the Dilemma of the Criterion”, *History of Philosophy Quarterly* 5 (1988), pp. 173-188, by quoting the Sextian passage given above.

⁷⁹ For Hegel’s criticism of Kant’s epistemology, see G. Bird, “Hegel’s Account of Kant’s Epistemology in Lectures on the History of Philosophy” and W. H. Walsh “The Idea of a Critique of Pure Reason: Kant and Hegel” (esp. p. 71), both in S. Priest (ed.), *Hegel’s Critique of Kant* (Oxford: Clarendon Press, 1987), Chap. II and VI. Hegel elaborates his discussion of new and modern scepticism in a more dialectical fashion in the *Lectures on the History of Philosophy*, Eng. tr. in three vols. by E. S. Haldane and F. H. Simson, (London: Routledge and Kegan Paul, 1968), vol. II, pp. 328-373, see especially pp. 357-63. Nicolao Merker, in his Introduction to the Italian edition of the *Rapporto dello Scetticismo con la Filosofia* (Roma-Bari: Laterza, 1984) has supported the hypothesis of a consistent continuity of perspective between the early article and the *Lectures*. On the contrary, Westphal (cf. “Hegel’s Solution to the Dilemma of the Criterion”, p. 174, note 2), has suggested that the article “[...] is not a reliable guide to Hegel’s use of Sextus’ dilemma in the *Phenomenology*, for two years later (in 1804) Hegel radically re-assessed his adherence to Schelling’s philosophy and, with that, the problem of question-begging”. Here I am inclined to see a certain continuity in Hegel’s position, at least as far as the impossibility of a Cartesian-like foundation of a dogmatic philosophy is concerned.

Kant by objecting to his dualist conception of knowledge as an *instrument whereby* or a *medium through which* we apprehend the world. Hegel inveighs against a vision of knowledge as a fixed relation between knower and known, and his explicit reference to the two analogies emphasises the close connection between his position and the sceptical discussion of the instrumentalist conception of the criterion.⁸⁰ In the latter work, Hegel refers explicitly to Reinhold's criticism and combines it with both the problem of the instrumental vision of knowledge and that of the justification of a theory of knowledge:

[...] the examination of knowledge can only be carried out by an act of knowledge. To examine this so-called instrument is the same thing as to know it. But to seek to know before we know [i.e. the Kantian critical project] is as absurd as the wise resolution of Scholasticus, not to venture into the water until he had learned to swim.⁸¹

By means of this metaphor, which was to become an anti-Kantian slogan, Hegel meant to summarise the various problems faced by Kant's *Critique*: dualism, instrumentalism, dogmatism and, most important of all for our present investigation, the intrinsic threat of a fundamental *petitio principii*.⁸² This is what was behind Mercier's apparently casual remark about the impossibility of assessing the reliability of the intellectual faculty without using it. But if Hegel anticipated the criticism, it was not for him to re-formulate the meta-epistemological problem in its more analytic form. That task was left to the Kantian party which was to answer the challenge.

⁸⁰ Cf. G. W. F. Hegel, *The Phenomenology of Mind*, Eng. tr. by A. V. Miller (Oxford: Oxford U. P., 1976), Introduction.

⁸¹ G. W. F. Hegel, *Encyclopaedia of the Philosophical Sciences: The Science of Logic*, Eng. tr. by W. Wallace with the title *Hegel's Logic* (Oxford: Clarendon Press, 1975), par. 10, p. 14.

⁸² Cf. M. N. Forster, *Hegel and Scepticism* (Cambridge Mass.: Harvard U. P., 1989), pp. 110-1.

4.3. Fries' Trilemma

In 1807, the same year in which Hegel's *Phenomenology* appeared, Jakob Friedrich Fries published his *Neue Kritik der Vernunft*. One of the aims of the work was to provide what has come to be described by Popper as a "psychologistic solution" to the foundationalist problem raised by Reinhold with regard to the *Critique*.⁸³ The problem was summarised by Fries in terms of a trilemma:

the premises of a theory of knowledge can either

- i) be dogmatically assumed; or
- ii) be justified by an endless chain of statements; or
- iii) be anchored to a psychological basis which is at the same time justificatory but not in need of a justification.

The metaepistemological problem was once again acquiring a central place in the history of epistemology, although the fundamental, circular nature of the problem was being allowed to remain implicit.

Because of the deep contrast between Fries and Hegel (and the force of the Idealist movement altogether), Fries' reinstatement of the metaepistemological problem might not have outlived the idealistic epoch, nor influenced the following German tradition, if it had not been for a "Fries-Renaissance" during the first two decades of this century. Among the authors of a revival of Fries' studies was Fries' pupil, Leonard Nelson. Deeply influenced by Fries' discussion of the metaepistemological problem, Nelson came to object to the entire project of an epistemology in the Cartesian, anti-sceptical and justificatory sense, and to favour a more descriptive and psycholo-

⁸³ Cf. B. Bianco, *J. F. Fries, Rassegna Storica degli Studi (1803-1978)* (Napoli: Bibliopolis, 1980). See also his article "Criticismo e Psicologismo. Note sul problema 'kantiano-friesiano'" in G. Micheli and G. Santiniello (eds.), *Kant a Due Secoli dalla "Critica"* (Brescia: La Scuola, 1984), pp. 195-208 where the complex issue of the charge of psychologism regarding the Fries'chen Schule is clearly analysed and rejected, and the preparatory work "Appunti sulla Fortuna di J. F. Fries", *Rivista di Filosofia Neoscolastica* 64 (1972), pp. 708-728, a historical review of studies concerning Fries.

gistic approach.⁸⁴ Despite his negative attitude, however, he contributed greatly to reawakening philosophers' interest in the foundationalist issue. Moriz Schlick, for example, dedicated a number of pages of his *General Theory of Knowledge*⁸⁵ to critical discussion of the question, explicitly relating it to Nelson's position. Referring to Bergson, Kant, Brentano, Husserl and Nelson himself he maintained that

anyone who holds that the Cartesian thesis [i.e. direct perception of a fact of consciousness] constitutes knowledge will inevitably be drawn into a similar circle.⁸⁶

But a more important and far-reaching effect was that, in his *The Logic of Scientific Discovery*⁸⁷ Karl Popper discussed the problem of the nature of basic statements in scientific theory under the heading of the wider problem which he labelled "Fries' trilemma".

Popper had been introduced to Fries' work by Julius Kraft, who was a distant relative of his and one of Nelson's pupils (he later became the editor of Nelson's works). Although he had already reached a similar formulation of the metatheoretical problem independently of Fries, he decided to call it "Fries' trilemma" in the *Logic* in order to credit his predecessor.⁸⁸ The problem was that

⁸⁴ Cf. L. Nelson, "The Impossibility of the "Theory of Knowledge", Eng. tr. in *Socratic Method and Critical Philosophy, Selected Essays*, Eng. tr. by T. K. Brown III, foreword by B. Blanshard, int. by J. Kraft (New York: Dover, 1965), pp. 185-205. See also his "Über das Sogennante Erkenntnisproblem", *Abhandlungen der Fries'schen Schule*, Neue Folge (1930), pp. 444-6.

⁸⁵ Cf. M. Schlick, *General Theory of Knowledge*, Eng. tr. by A. E. Blumberg, (Wien, New York: Springer-Verlag, 1974), pp. 79-94. Schlick mentioned Nelson (p. 87, note 33 and especially p. 90 in which Fries' trilemma is sketched), Hegel, Herbart and Lotze (p. 90) as philosophers who had previously dealt with the foundationalist issue.

⁸⁶ Schlick, *General Theory of Knowledge*, p. 86.

⁸⁷ K. Popper, *The Logic of Scientific Discovery* (London: Hutchinson, 1959, first published in 1934), Chap. V, esp. pp. 93-105.

⁸⁸ I owe much of this information to two letters from Karl Popper in which he outlined the origin of his discussion of Fries' trilemma in his *Logic*.

[...] if the statements of science are not to be accepted *dogmatically*, we must be able to *justify* them. If we demand justification by reasoned argument, in the logical sense, then we are committed to the view that *statements can be justified only by statements*. The demand that all statements are to be logically justified (described by Fries as a “predilection for proofs”) is therefore bound to lead to an *infinite regress*. Now, if we wish to avoid the danger of dogmatism as well as an infinite regress, then it seems as if we could only have recourse to *psychologism*, i.e. the doctrine that statements can be justified not only by statements but also by perceptual experience. Faced with this *trilemma*—dogmatism vs. infinite regress vs. psychologism—Fries, and with him almost all epistemologists who wished to account for our empirical knowledge, opted for psychologism.⁸⁹

The importance of Popper’s re-formulation of the problem and of his dynamic solution—there is no need to consider the infinite regress as negative, for we simply leave the presuppositions of a specific science open to the possibility of further testing⁹⁰—can not be over-emphasised. The source of some of the most important recent works on the foundationalist problem in the German tradition, it has been the origin of a deep modification in the interpretation of the meta-epistemological problem. In Fries, the question of the justification of the premises of an epistemology was still understood in *Kantian terms*, that is as *a problem for the foundation of a theory of knowl-*

See also K. R. Popper, “Die beiden Grundprobleme der Erkenntnistheorie”, ed. by J. C. B. Mohr, (Tübingen, 1979), Chap. V. Popper’s Kantian and neo-Kantian background has been investigated by G. F. De Maliandi, “Popper, Nelson and Kant”, *Manuscrito* 14 (1991), p. 19-40, who provides a reconstruction of some ideas that Popper inherited from Kantian philosophy through its neo-Friesian and above all Nelson’s interpretation.

⁸⁹ Popper, *The Logic of Scientific Discovery*, p. 94.

⁹⁰ In his *Hegel—From Foundation to System* (Dordrecht: Martinus Nijhoff Publishers, 1980), pp. 13-5, David Lamb has conjectured an analogy between Reinhold’s later dynamic foundationalism and Popper’s approach. The analogy may be controversial and perhaps it is suggested by a Hegelian interpretation of Reinhold. In any case, I believe Lamb is right in connecting the two philosophers in so far as we have seen that Popper discussed a problem which emerged from Reinhold’s criticism.

edge, which, in its turn, aims at the transcendental foundation of human knowledge *tout court*.⁹¹ From Popper onwards, philosophers have been more inclined to understand the metaepistemological problem as *a problem concerning the foundation of knowledge*, in particular scientific knowledge or specific sciences, and no longer the justification of a *theory of knowledge in general*, an *Erkenntnistheorie*. I shall examine this particular feature of the problem in the next chapter, but it is worth stressing here that the different interpretation of the problem can be connected to the more general crisis undergone by epistemology as a philosophy of knowledge in search of an absolute foundation—a crisis which has also been favoured by the difficulty in finding a satisfactory solution to the foundationalist problem, and which has turned the attention of epistemologists to more specific issues concerning the philosophy of science.⁹² By putting the discussion of the nature of basic statements in the context of Fries' trilemma, Popper modified the original features of the issue and embodied, but at the same time also actively participated in, the epistemological upheaval whose consequences we are still experiencing. Three philosophers who have been influenced in different ways by Popper's approach, namely Imre Lakatos, Hans Albert and Karl Otto Apel, give us a clear picture of this new approach.

Following the Aristotelian tradition, Lakatos has interpreted the metaepistemological problem in terms of infinite regress, putting its discussion in the context of the debate between the inductive or deductive foundation of mathematics.⁹³ In Lakatos, the foundationalist

⁹¹ Cf. Popper, "Die beiden Grundprobleme der Erkenntnistheorie", p. 106 and ff.

⁹² Cf. J. Habermas, *Knowledge and Human Interests*, Eng. tr. by J. Shapiro (London: Heinemann, 1972), Chap. I.

⁹³ Cf. I. Lakatos, "Infinite Regress and Foundations of Mathematics", in *Philosophical Papers II*, ed. by J. Worrall and G. Currie, (Cambridge: Cambridge U. P., 1978), pp. 3-23; there is an explicit reference to Fries' trilemma and to Popper's discussion of it on p. 5 and p. 18, note 2. On Lakatos' insistence on the dichotomy deduction vs. induction, cf. S. E. Toulmin, "History,

problem now refers to a classic problem of philosophy of mathematics which bears very little resemblance to, and indeed may have no connection with, the sceptical and epistemological origin of the issue.

Albert's interpretation of Munchhausen's trilemma⁹⁴ is probably the most evident example of the alteration undergone by the meta-epistemological problem. According to Albert, the central problem in epistemology is the problem of the foundation of knowledge—"how knowledge is grounded"⁹⁵—but solutions which attempt to provide a justification of knowledge are bound to confront the following trilemma: in order to justify a statement one must choose between an *infinite regress*, a *logical circle* or the *breaking-off of the process* by means of an appeal to allegedly self-justifying premises which support, but do not need to be justified by, other elements of the theory. The formulation of the trilemma leaves no doubts about its historical origins⁹⁶ and it has the great merit of re-introducing the alternative of the *petitio principii* as at least one, if not the most important, aspect of the problem. It is worth noticing that, from Fries onwards, the

Praxis and the Third World", *Boston Studies in the Philosophy of Science* 39 (1976), pp. 655-75.

⁹⁴ H. Albert, "Science and the Search for Truth", *Boston Studies in the Philosophy of Science* 1978 (58) pp. 203-20, whose theses are expanded in *Treatise on Critical Reason* (Princeton U. P.: Princeton N. J., 1985), to which I refer. For Albert, the Fries-Nelson School of Kantism embodies a mere psychologistic dogmatism (cf. p. 20, note 9); Lakatos' article is quoted on p. 59, note 29. Note that there is no reference to Fries' trilemma or to the *diallelus*. Albert's anti-foundationalism has been criticised by R. Haller in "Concerning the So-called 'Munchhausen trilemma'" *Ratio*, 16 (1974), pp. 125-140.

⁹⁵ H. Albert, *Treatise on Critical Reason*, p. 12.

⁹⁶ The trilemma is formulated on p. 18 of the *Treatise on Critical Reason*. On p. 19, note 7 Albert writes: "Incidentally, even earlier [than Dingler's work] the question of the justification of knowledge had produced analyses in which the trilemma emerged in a more or less clear form; cf. Richard H. Popkin, *The History of Scepticism from Erasmus to Descartes* (rev. ed. Assen, 1964), pp. 3, 52, 137 and *passim*."

Kantian tradition had tended to disregard this aspect, possibly for anti-idealistic reasons, given the fact that the idealist program could be interpreted as an original appreciation of the circular-systematic justification of knowledge. Unfortunately, the new context, constituted by the tension between the justification and the critical examination of specific instances of knowledge, together with the Aristotelian perspective, does not allow Albert to interpret his Munchhausen's trilemma correctly, as a problem for the justification of the premises of a theory of knowledge—that is as a problem which would affect Fries' "principle of self-confidence of reason" as well as his own falsificationist "principle of critical examination"⁹⁷—but only as a difficulty concerning the basis for our knowledge.

Such an erroneous lowering of the theoretical level at which the metaepistemological problem is to be placed may also encourage a step back to a somewhat Kantian approach, which supposes that sciences are in need of a transcendental grounding-explanation, not of a justificatory, Cartesian-like epistemology. Of course, in this case the radical, sceptical challenge is left implicit or thoroughly disregarded, being replaced once again by the Aristotelian problem of the justification of first axioms. This seems to be the path followed by Karl Otto Apel, a philosopher who has implicitly defended a Kantian-like position by proposing a linguistico-transcendental approach to the *metatheoretical* (yet not metaepistemological in the technical sense adopted so far) problem.⁹⁸

⁹⁷ Albert seems to raise the issue of the justification of his own falsificationist approach and opt for a moral justification of it, see *Treatise on Critical Reason*, p. 48 and ff. especially pp. 52-3.

⁹⁸ See Apel's "The problem of Philosophical Fundamental-Grounding in Light of a Transcendental Pragmatic of Language". Apel has been influenced by Popper indirectly. He frames his discussion of the problem within Albert's "Munchhausen's trilemma". For his reference to Aristotle see p. 243, note 12.

5. *An Overview*

By following the various formulations of the *diallelus*, I have described a few episodes in the history of modern epistemology. The time has now come for a more comprehensive recapitulation of such a phenomenological survey. What I shall say refers only to the prevailing traits of each area of the map.

Some features which have occurred repeatedly, are the analogical interpretation of knowledge as an instrument or medium and the use of several dichotomies: dogmatism vs. scepticism (or criticism), a dichotomy which nowadays is obviously potentially misleading;⁹⁹ phenomenological descriptivism vs. foundationalist justificationism; and finally deductive vs. inductive justification. Philosophers have been ready to adopt these in order to classify their own and others' positions. The last dichotomy especially, encountered in the Popperian area of the Kantian domain, throws light on the more methodologically-orientated interpretation of the issue in the German tradition, which is probably due to the Kantian origins of the formulation of the problem. A philosopher as theoretically German as Collingwood, for example, was as ready as Lakatos or Apel to frame the metaepistemological question within the problem of the nature of inductive and deductive processes. Yet, contrary to the latter, he had an understandable inclination to appreciate the circular feature of the problem and to envisage in it its own solution, thus reinforcing the hypothesis that the disappearance of the *petitio principii* as the principal problem of the foundationalist program in the presentation of the issue in the Kantian school may have had an anti-idealistic origin.¹⁰⁰ This also explains the greater interest of the Kantian tradition in the Aristotelian, logical origin of the foundationalist issue, and the fact that the neighbouring domain would certainly be represented by the geographically Anglo-Continental Wittgensteinian and anti-

⁹⁹ See Albert, *Treatise on Critical Reason*, p. 19.

¹⁰⁰ R. G. Collingwood, *An Essay on Philosophical Method* (Oxford: Clarendon Press, 1933), pp. 160-5.

Cartesian tradition (especially the Wittgenstein of *On Certainty*), which focuses on the linguistic, i.e. semantic, pragmatic and communicative, conditions or criteria which make it possible to speak of instances of knowledge and meaningful doubts. We would expect from the German-Kantian tradition a more evidently metatheoretical interpretation of the foundationalist problem. We have seen that this was still the case until Nelson. Lately, the crisis in epistemology, the subsequent emphasis on studies focusing more narrowly on the philosophy of science, and the reference to the Aristotelian, logical roots of the problem and hence the interpretation of the problem as consisting essentially in a regressus *ad infinitum* are all factors which have contributed to misplacing Munchhausen's trilemma at a logical level lower than that of the *diallelus*. The foundationalist issue and the incapacity of a theory of knowledge to find a solution to it have prompted philosophers to abandon wide, all-encompassing epistemological projects and to focus, in terms of philosophy of science, on discussion of the foundation of knowledge at the logically lower level of specific instances or types of knowledge.

On the Cartesian side of our map, we have seen how philosophers tend to show a prevailing interest in an extensionalist approach. They are inclined to privilege the search for an indisputable extension of knowledge. Thus, the Cartesian domain is more strictly connected with the other, more eminently American domain, of the problem of the given (it is not by chance that studies in the philosophy of knowledge are still pursued mainly in American universities, within a strongly neo-modern orientation), which is closer to the sceptical origins of the issue and presents a more evident, metaepistemological interpretation of the problem. Less shaken by the crisis in epistemology than the post-Kantian tradition, the Cartesian one tends to disregard methodological solutions of the problem, especially in the sense of a transcendental approach, and to carry on investigations into the possibility of a theory of knowledge which are largely in agreement with a modern, out-moded outlook, despite the refined technical apparatus provided by recent developments in formal logic and conceptual analysis.

We are now well acquainted with the history of the formulations of the issue but, as was clear from several anticipation of what is to come, we are still in need of a formal discussion of the morphology of the problem. Only the latter can legitimate a critical assessment of the solutions which have been, or could be, put forward in the course of its historical metamorphoses. As the reader will have guessed, this is the analytical task of the next chapter.

CHAPTER FOUR

THE PROBLEM WITH THE THEORY

A MORPHOLOGICAL ANALYSIS

*Se vogliamo che tutto rimanga com'è
bisogna che tutto cambi*
Tomasi di Lampedusa, *Il Gattopardo*

1. Three Routes

Though brief and rather selective, the historical exploration carried out in the previous chapter has sufficed to open up in front of us three routes followed by the development of the foundationalist problem. The contemporary debate within the German tradition can be traced to its Kantian origins via the neo-Kantian and Popperian discussion of Fries' trilemma. Foundationalist themes within the English-speaking tradition usually share a common Cartesian origin, to which they are often linked through discussion of the Cartesian circle. Finally, we have seen how both traditions are related to Sextus Empiricus' *diallelus* as their common source in ancient thought. Having established the historical pattern of the problem, we must now examine its logical features, with three aims in view, namely

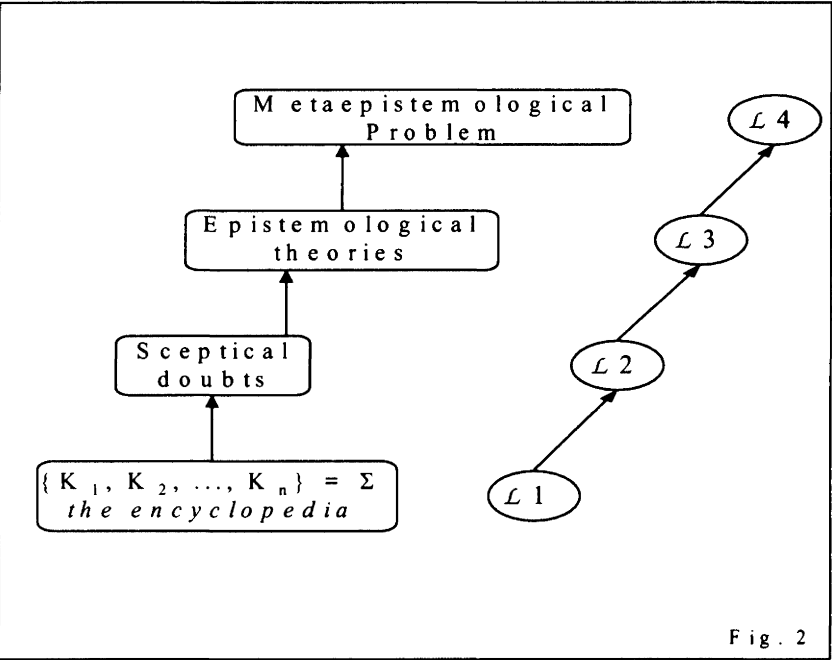
- the reconstruction of the morphology of the *diallelus*,
- the diagnosis of the nature of the problem; and finally,
- the clarification of the necessary limits within which any promising strategy for the treatment of the problem can be consistently elaborated.

The fulfilment of these three tasks will provide us with all the information required for the analysis of the anti-sceptical solutions of the *diallelus*, which will be developed in the next chapter.

As regards the actual work to be carried out in the present chapter, I need hardly stress that it will require an obvious change, both in method and in perspective. The scholarly interest must move into the background, while a purely reflective approach must come to the fore again, for I shall no longer consider the history of the problem in question, but only its logical features.

2. A Hierarchy of Levels

The logical analysis of the morphology of the problem requires the construction of a slightly abstract model in which the *diallelus* is interpreted as a fourth-order ($\mathcal{L}4$) challenge addressing epistemological theories, which in turn are described as third-order ($\mathcal{L}3$) responses to second-order ($\mathcal{L}2$) sceptical doubts concerning first-order ($\mathcal{L}1$), *prima facie* potential instances of knowledge.



The acceptance of such a hierarchy of levels is not completely without difficulties, so we should digress for a moment in order to be rid, as soon as possible, of some objections that may readily be levelled against it. We shall then be able to turn all our attention to the discussion of the theoretical reasons in favour of its construction.

According to Paul Woodruff, to the question

Which came first, the sceptic or the epistemologist? The answer is "Neither: Plato came first".

He has developed such an answer by recalling that

much of modern epistemology has tried to answer scepticism, and this tempts us to think of epistemology as second in order of thought and of history¹

and that this would be a largely inappropriate view, since scepticism emerges only after Aristotle, as an answer to dogmatic philosophies, Stoicism included. As Woodruff adds, his remarks intend to highlight the fact that in Plato's early dialogues Socrates supplies both the dogmatic content and the critical arguments, giving rise to a dialectics which is similar to, but not yet identical with, the debate between the sceptic and the epistemologist.

From a historical point of view, Woodruff is obviously right: scepticism developed as a fully-fledged philosophical position only after Plato's and Aristotle's theories of knowledge. Thus epistemology is not always third in historical order and therefore may not necessarily be third in order of thought. Still, precisely because the logical analysis elaborated in this chapter does not follow the historical development, I would say that epistemology is third in order of logical reconstruction, if by the first-order we understand what we acritically believe are instances of knowledge and if we disentangle,

¹ P. Woodruff, "Plato's Early Theory of Knowledge" in S. Everson (ed.), *Epistemology* (Cambridge: Cambridge U. P., 1990), pp. 60-84, quotation from p. 61.

within the sceptical challenge, two different strands: the attack against knowledge and the attack against the possibility of having a theory of knowledge. Once such a distinction is drawn, uncertainties resulting from actual mistakes, critical doubts, Socratic questions, sophistic arguments or sceptical challenges of the first kind can all be merged into a single level, since they concern the nature of knowledge *tout court*. They constitute a second-stage battery of doubts and puzzles about the outcome of our cognitive abilities that, just for the sake of simplicity, can be labelled sceptical. Without such obscurities or incertitudes there would be no questions on the nature of knowledge and therefore no epistemological attempts at systematic answers.² The third level is, then, represented by such an epistemological reflection, whereas the fourth stage is the other sceptical challenge, namely the attack on the possibility of a theory of knowledge. The extensionalist and quantitative language already adopted in chapter two now also turns out to be appropriate for the task of replacing the historical succession with the logical sequence just sketched. Depicting some of the logical phases by means of semi-visual or semi-spatial patterns is in line with the use of topographic analogies made in the previous chapter (the various territories, paths and so on). As usual, the goal is to maximise clarity and I shall not find anything that is theoretically crucial on such a method of presentation. I do believe, however, that one understands something better if one can conceive of it in visual terms and I hope that the analysis presented in this chapter will benefit from such an approach, as the historical reconstruction has in the previous chapter.

² Thus, according to Pollock, for example: "Skeptical arguments generate epistemological problems", *Knowledge and Justification* (Princeton: Princeton U. P., 1974), p. 5; and "In short, the task of the epistemologist is not to show that the skeptic is wrong but to explain why he is wrong", *Theories of Knowledge* (London: Hutchinson, 1987), pp. 6-7.

3. *The Morphology of the Problem*

The dialectic of expressions of knowledge, sceptical doubts and epistemological responses is made possible by an assumption common to both debaters. Both the epistemologist and the sceptic can accept that there are human beliefs, judgements, statements or even propositions which people claim to be actually, i.e. not only logically or potentially, knowledge-bearers. As such they would be true (in the ordinary sense of being adequate, objective, faithful or reliable) descriptions of the intrinsic nature of the external world. This common ground can be characterised with four premises.

1) For the time being, we shall disregard the fact that there are also beliefs, judgements, statements or propositions about the internal, mental world, which some people claim to be equally, if not even more, certain than equivalent knowledge-bearers concerning the external, physical world.

2) One may doubt the historical appropriateness of the dichotomy external vs. internal world. Miles Burnyeat, for example, has reminded us that what is nowadays a basic and common distinction was unknown to Sextus Empiricus and has its origins in the seventeenth-century, sceptical Renaissance, when Gassendi, among others, aligned Sextus' distinction between the apparent and the real nature of the world with the contrast between

the outside things (what is accessible to everyday observation through the senses) and their inner nature, where [...] the inner/outer contrast bespeaks of a new world, in which the interpretation of ancient Pyrrhonism has been overlaid with the preoccupation of seventeenth-century science's use of the dichotomy.³

I wonder whether Burnyeat may be right, but in any case, for the

³ M. Burnyeat, "The Sceptic in his Place and Time", in R. H. Popkin and C. B. Schmitt (eds.), *Scepticism from the Renaissance to the Enlightenment*, proceedings of the conference held at the Herzog August Bibliothek, 22-25 February 1984 (Wiesbaden: Otto Harrassowitz, 1987), pp. 13-43, quotation from p. 18.

sake of our present purposes, I shall endorse Gassendi's alignment and disregard the historical difference.

3) One may question the use of four different terms, viz. beliefs, judgements, statements and propositions, in order to identify the members of the family of knowledge-bearers. By their use, I mean to indicate here that henceforth I shall draw no distinction between modern analyses of knowledge in terms of pre- or a-linguistic knowledge-bearers, e.g. the Cartesian beliefs or the Kantian judgements, contemporary analyses which adopt linguistic interpretations of knowledge in terms of statements, propositions or justified true beliefs and more Platonistic interpretations of the knowledge-bearers as propositions.

4) Finally, for the sake of consistency one may wish to specify that the sceptic concedes to the epistemologist only that they can both *believe* that there are other beliefs,⁴ not that they *know* that there are ones. The point, however, does not need to be over-emphasised here.

Having specified all this, let us turn now to the construction of our set of knowledge-bearers.

In his *Author's reply to the Seventh Set of Objections*,⁵ Descartes hints at the possibility of constructing such a common ground extensionally. He compares beliefs to apples in a bucket and the task of an epistemology to that of selecting the good from the rotten ones, that is beliefs that are in fact knowledge-bearers from "merely doxastic" beliefs. In order to construct our model we can follow Descartes' suggestion and agree about the following approximations:

- D₁₄) beliefs, judgements, statements and propositions =_{def.} (dispositional) linguistico-doxastic phenomena P;
- D₁₅) a P which may assert something about the nature, i.e. the

⁴ The difficulty is discussed by M. Burnyeat in "Can the Skeptic live his Scepticism?", in M. Burnyeat (ed.), *The Skeptical Tradition* (Los Angeles: University of California Press, 1983), pp. 117-148.

⁵ Cf. *The Philosophical Writings of Descartes*, Eng. ed. by J. Cottingham, R. Stoothoff and D. Murdoch, 2 vols. (Cambridge: Cambridge U. P., 1984), pp. 324.

properties and the existence,⁶ of external reality *W* (i.e. persons, things, events, facts etc.) even if only elliptically =_{def.} potential knowledge-bearer (*kb*);

and

- *D*₁₆) a *kb* that enjoys an epistemic relation (*R*_e) with *W* such that it conveys true information about *W* =_{def.} a knowledge (*K*).

Needless to say, neither of the previous equations, nor their conjunction, can even aim at giving an exhaustive definition of knowledge. They lack, for example, any reference to the notion of correlation between *K* and *W*, or to the requirement of a certain coherence among the body of *K*s. The ordinary suggestion that some sort of justification should play a role in establishing whether a *P* is a *K*, e.g. I know that *q* if and only if I have some good reasons to believe that *q* or to believe that $\neg q$ is false, is also disregarded, in this case because of our extensionalist approach. Thus, the previous definitions are far from meeting even the requirements established by a Gettier-type analysis in terms of true and justified beliefs. All this, however, should not be seen as a problem, since our present goal is only that of introducing a clear and explicit formulation of what we ordinarily take to be the minimal, necessary condition which a knowledge-bearer, such as an empirical belief, should satisfy in order to count as an instance of knowledge, namely that it is a true description of some state of the universe. The type of notion of truth to be adopted in this context is another question that can also be left unanswered. The reference to the role of justification of the *kb* can be put on one side as well because it is going to reappear in all its disruptive force at the metatheoretical level of the justification of the premises of a theory of knowledge which adopts *D*₁₄/*D*₁₆. All *D*₁₄/*D*₁₆ have to be fit for is to provide a common, minimal basis for the debate between the sceptic and the epistemologist. They are sufficiently generic as to

⁶ I shall assume, with Kant, that existence is not a *property* or a *quality* (in the sense of the scholastic attributes) of something but a sort of modal position among possible ways of being and use nature in order to refer both to the existence and to the properties of the external world.

allow us to suspend any commitment with respect to a specific theory of knowledge.

Let us now characterise the linguistico-doxastic phenomena which aspire to the status of instances of knowledge and whose historical occurrence is accepted by both the sceptic and the epistemologist, thus:

- D_{17}) a P aspiring to the status of $K =_{\text{def.}} ?p^k$

The question mark prefixed to p^k represents what Husserl calls the *Index der Fraglichkeit*⁷ ("index of questionability"). Any of our potential knowledge-bearers, even the most certain, is put in doubt and those which appear most acceptable are located in the set of aspirants to the title of knowledge. Such a set of $?p^k$ represents Descartes' bucket, that is a first level ($\mathcal{L}1$) set of candidates to the role of instances of knowledge. This is precisely what in chapter two I have called $\{\Sigma_1, \Sigma_3\}$, the entire class of all the potential expressions of knowledge. Both the sceptic and the epistemologist further agree to work on a subclass of $\{\Sigma_1, \Sigma_3\}$ which is large enough to eliminate the possibility that any eventual problem concerning the recognition of one or more $?ps^k$ as K s could result merely from its limited extension. Let us call it $E^{\mathcal{L}1}$.

The sceptic casts powerful doubts on the possibility of removing the index of questionability from any member $?p^k$ of $E^{\mathcal{L}1}$. He may not disagree that there occur $?ps^k$, and I should imagine Sextus Empiricus would have been ready to accept even a discussion in terms of propositions, but he will certainly disagree on their capacity to amount to instances of knowledge that capture the real nature of the external world ($\tau\acute{\alpha} \upsilon\pi\omicron\kappa\epsilon\acute{\iota}\mu\epsilon\nu\alpha$).⁸ Hence, Aenesidemus' ten tropes and Agrippa's first and third trope resound throughout the history of

⁷ Cf. E. Husserl, *Die Idee der Phaenomenologie, Fünf Vorlesungen*, in *Gesammelte Werke*, Band II, ed. by Walter Biemel (The Hague: Martinus Nijhoff, 1958). Unfortunately this expression is not translated literally in the Eng. tr. *The Idea of Phenomenology*, by W. P. Alston and G. Nakhnikian (The Hague: Martinus Nijhoff, 1964), p. 22.

⁸ Cf. Sextus Empiricus, *Outlines of Pyrrhonism*, I. Chap. X and I. 59.

philosophy and have helped to shape the tradition of epistemological studies. They consist of doubts about the epistemic validity of several types of epistemic claims in terms of their fallibility or relativity. Similar challenges, concerning the epistemic status of members of $E^{\mathcal{L}1}$, rank above the first level of $E^{\mathcal{L}1}$ itself and I shall refer to them as objections^{L2}.

Any theory of knowledge dedicates much of its effort to attempting to answer various, more or less refined versions of objections^{L2}. Although a theory may be ready to recognise that membership of the set of instances of knowledge cannot always be easy to establish, at the same time, it will maintain that objections^{L2} about the nature of *each member* of $E^{\mathcal{L}1}$ are unjustified, because:

- (TK) there is at least one criterion C which enables us to discriminate a subset of E^x such that: $\forall ?p^k (((?p^k \in E^x) \wedge R_e(?p^k, W)) \rightarrow (?p^k = K))$ that is, for every $?p^k$, if $?p^k$ belongs to the subset of the set of potential knowledge-bearers chosen as a common ground by the sceptic and the dogmatist and enjoys an epistemic relation (R_e) with W, then $?p^k$ is an instance of knowledge.

Suppose that some $?p^k$ satisfy the condition $R_e(?p^k, W)$, then $\{?p^k_1, ?p^k_2, \dots, ?p^k_n\}$ for $n \geq 1$ will constitute a set of instances of knowledge and the whole set $\{?p^k_1, ?p^k_2, \dots, ?p^k_n\}$ will be equivalent to the finite, global encyclopaedia of *expressions* of human knowledge $\{\Sigma_1, \Sigma_3\}$.

According to different theories of knowledge, the criterion C may correspond either to:

- C₁) one or more paradigmatic specimens of knowledge. In this case we could speak more precisely of C as being *in itself* a standard or a parameter of knowledge, as in the case of the meter in Paris; or to
- C₂) a statement of one or more properties.

The latter are often interpreted relationally and according either to various types of knowledge, such as a priori, empirically testable etc., or to the derivation of $?ps^k$ from certain reliable sources of knowledge like perception, memory or intuition. The term sources is

more adapt here than the expression belief-forming mechanisms or processes, in order to leave unspecified whether cases like divine revelation could count as a reliable way of acquiring knowledge.

In the case of C_1 , for every possible $?p^k$, if $?p^k$ is in a satisfactory relation to C_1 then $?p^k$ is an instance of knowledge. By satisfactory relation we may understand any logical relation which is justification-conductive, for example a formal deduction or, less strictly, an abductive or probabilistic inference from C_1 , or even some weaker, epistemological notion of homorphism, according to which p is justified because it is similar to q and q is already justified. In any case, in order to become a member of the set of the instances of knowledge it is sufficient for a $?p^k$ to satisfy certain relational requisites stated by C_2 . For example, having the property of being clear and distinct, or of having been reached by means of an empirically testable process, may count as satisfactory tests for the elimination of the index of questionability.

Ideally, the two sets obtainable from the application of C_1 and C_2 are co-extensive. Certainly, it is always possible either to construct C_2 on the basis of C_1 —given some standard specimens of knowledge we extract some relational parameters according to which we proceed in the selection of other members of $E^{\mathcal{L}1}$ —or to validate C_1 on the basis of C_2 : a specimen of knowledge is exemplary because it satisfies certain relational properties specified by C_2 .

As an answer to objections^{L2}, TK introduces a third-level context of discussion ($\mathcal{L}3$) into the debate between the sceptic and the epistemologist. By challenging these attempts to justify our knowledge we finally arrive at the metatheoretical objection levelled against the status of the fundamental premises of a theory of knowledge itself. On this fourth level ($\mathcal{L}4$), the sceptic argues that in fact TK begs the question (cf. Agrippa's second, fourth and fifth tropes).

The sceptical challenge concerns the status of C and can be summarised as follows. For the sake of conceptual economy, let us assume that a TK elaborated in order to solve objections^{L2} consists only of a finite conjunction of statements " $S_1 \wedge S_2, \wedge \dots S_n$ " (for $n \geq$

2) and that, for at least one $?p^k$ in $E^{\mathcal{L}_1}$, TK includes the claim, at S_n , to the effect that the theory is able to justify the elimination of the *index of questionability* from $?p^k$ and thus to determine its assignation to the set of knowledges on the basis of " $S_1 \wedge S_2, \wedge \dots S_{n-1}$ ". The set $\{S_1 \wedge S_2, \wedge \dots S_{n-1}\}$ now works as the large premise that warrants the validity of the final identity statement $?p^k = K$. If we eliminate from $\{S_1 \wedge S_2, \wedge \dots S_{n-1}\}$ whatever is not strictly relevant to the assignation of $?p^k$ to $\{\Sigma_1, \Sigma_3\}$, the restricted premise either incorporates C (if C is elaborated in terms of C_2) or is identical to C (if C is elaborated in terms of C_1). Still for the sake of economy, let us also assume that the more restricted premise-conjunction is constituted only by a complex statement, i.e. it is equal to $\{S_c\}$ and that S_c *represents*, i.e. is either identical to or incorporates, C_1 and/or C_2 . S_c is the essential, first premise which enables the epistemologist to establish the membership of $?p^k$ in the set of knowledges. The sceptical objection⁴ hinges on the doubtful justificatory status of S_c and can be articulated in the following passages:

- 1) Suppose that, according to C_1 , S_c is already an exemplary specimen of knowledge. Then the theory is committing a *petitio principii*. In order to show that for at least one member $?p^k$ of $E^{\mathcal{L}_1}$ it is the case that $?p^k$ is in a relation R_e to W and therefore that $?p^k = K$, the theory is already assuming that $S_c = K$ and so it is begging the question. Both the sceptic and the epistemologist agree that the development of a theory of knowledge starts from the assumption that an investigation into the nature of knowledge is spurred by the emergence of considerable problems concerning the status of our linguistico-doxastic phenomena. In other words, when we pass from $\mathcal{L}_2$ to $\mathcal{L}_3$ our state is one of potential ignorance about what could count as an instance of knowledge. We do not know yet whether any $?p^k$ is in a relation R_e to W, but we are confident that we will be able to produce a theory such that it will become possible to estimate whether and, if so, how many $?ps^k$ are Ks. When we move from $\mathcal{L}_2$ to $\mathcal{L}_3$ the set of knowledges is empty and we are looking for an *instrumentum iudicandi* with

which to decide whether at least one member can be assigned to it.⁹ But by assuming “ $S_c = K$ ” we solve the problem only by committing a fallacy.

- 2) Suppose now that, according to C_2 , S_c states a relational condition such that, if $?p^k$ satisfies it, it counts as a K . Although the assumption of C_2 is a less obvious *petitio principii*—and this because S_c includes an appeal to and it is not simply an instance of knowledge—the sceptic can still argue that either
 - a) S_c has been obtained by means of an inductive abstraction from other members of E^{L1} and therefore we are caught in the same *petitio principii* as in (1); or
 - b) S_c is assumed as being in itself an instance of knowledge, but then:
 - i) in order to justify this assumption we refer to some other member of E^{L1} and so we are back to the same *petitio principii* as in (a); or
 - ii) in order to justify this assumption we refer to another $?p^k_n$ or to another criterion C_n , which in turn requires a justification either from another $?p^k_m$ or from another criterion C_m and so on, and in this way either we are caught in a *regressus ad infinitum* or at a certain point we are back to a *petitio principii*; or
 - iii) in order to delay the justification of the assumption, we accept it as probationary, until the whole theory of knowledge is formulated and then we prove that its assumption is justified on the basis of the theory, but in this way too, we are caught in a *circulus in probando*, given that the internal consistency of a fully developed theory of knowledge is a necessary but not a sufficient condition to warrant the truthfulness of its first premises. A perfectly coherent theory of knowledge could still

⁹ In this way it has been possible to consider Meno's paradox as a metatheoretical issue, cf. Plato, *Meno*, 80^d and ff., and Sextus Empiricus, *Against the Dogmatists*, Eng. tr. by R. G. Bury, (Cambridge Mass.: Harvard U. P., 1976), II.331a: “how can anyone even begin to inquire if he has no notion of the object of inquiry?”.

be totally wrong as far as its conclusions about the nature of knowledge are concerned.

According to the sceptic, in each of the previous cases the adoption of S_c is unjustified. The only remaining alternative is the mere assumption of S_c , but without the possibility of providing a satisfactory justification, this is completely arbitrary option.

This further attack on the possibility of a theory of knowledge can be called objection⁴⁴. To many people objection⁴⁴ might not seem an insoluble problem and—although it can easily be adapted to more complex cases, so that, for example, the outcome would be no different if we were to speak of the reasonableness of the acceptance of a belief instead of its justification, for in this as in other cases the same alternatives could be rephrased according to different standards of epistemic appraisal—in principle I am inclined to share such an optimistic outlook. All I am claiming, at the moment, is that

- the previous analysis is an adequate presentation of the sceptical challenge;¹⁰ that
- the sceptic seems to be able to make a *prima facie* powerful case against the value of any theory of knowledge; and finally, that
- any theory of knowledge worthy of its name should be able to provide the basis for a satisfactory answer to such an attack, at least implicitly.

Since the possibility both of envisaging a solution to the problem and of assessing its success will depend on having acquired an adequate grasp of the nature of the problem itself, let us examine the logical and metatheoretical features of objection⁴⁴.

¹⁰ For another formalization of the foundationalist problem with reference to the Munchhausen trilemma see J. Friedmann, "Bemerkungen zum Munchhausen-Trilemma", *Erkenntnis* 20 (1983), pp. 329-340. I may add here that I agree with Friedmann on his final suggestion for a logically less strict requirement of justification. However, if his remark on a criterion of justification based on the scientific community (p. 338) is not just an observation of a matter of fact but should be taken as a proposal, I do not see how it can actually escape the foundationalist circle.

4. *Diagnosis of the Problem*

4.1. *The Logical Structure of the Problem*

As Sextus Empiricus rightly perceived,¹¹ the most important difficulty inherent in the justification of the premises of a theory of knowledge is the fallacy of *petitio principii*. The other two problems, i.e. the infinite regress and the accusation of unjustified assumption, are better understood as supporting arguments, by means of which the sceptic prevents us from evading the most fundamental difficulty. The fact that the *petitio principii* is a more fundamental problem than the *regressus* is due, not simply to a contingent organisation in the priority of the arguments, but to the logic of the notion of justification itself. When we start developing a theory of knowledge we are supposed to search for the most reliable conjunction of premises from which an analysis of our knowledge-bearers can be developed. Once reached, such premises cannot be further grounded. That their degree of justification cannot be increased is true by hypothesis, for if it could be then this would not be the set of premises from which our analysis began. It follows that no matter how many further premises we may adopt to justify the initial set, still *ex hypothesis* these premises will rank at the same justificatory level. As has often been made clear, from Aristotle to Wittgenstein, the accumulation of statements will not result in an increment of acceptability, if what we are doubting are already the most certain of our beliefs. We may have a *formal regress* of an infinite number of statements, but the possibility of improving the degree of cogency of our premises soon reaches an end. It is the futility of this *qualitative escalation*, as it were, which is stressed by Wittgenstein when he writes:

My having two hands is, in normal circumstances, as certain as anything that I could produce in evidence for it. That is why I am not in a position to take the sight of my hand as evidence for it. [And then] "I

¹¹ Sextus Empiricus, *Outlines of Pyrrhonism*: I.115-17.

know this is a hand"—And what is a hand?—"Well, *this*, for example".¹²

As a consequence, although many have suggested that the acceptance of the sceptical challenge forces us to succumb to an infinite regress or step into a mere assumption, the most fundamental threat turns out to be the fact that the regress itself develops within the closed field of our rational capacities. Asking for further justification becomes, at a certain point, completely fruitless because there is a limit to the degree of certainty we can appeal to. If the acceptability value of the initial set of premises is challenged but cannot be increased, then we have reached the place where reason, if further consulted, can only restate itself. By means of the *diallelus* (objection¹⁴) the sceptic tends to induce an escalation of justifications which ends in a sort of logical implosion. It seems that sooner or later the infinite sequence of justifications must end by losing any real effect, being bound to represent a mere repetition of statements whose degree of acceptability is already in question. Sellars has written that

in characterizing an episode or a state as that of knowing, we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons of justifying and being able to justify what one says.¹³

Enlarging on this metaphor, we may now say that Sellars' logical space of justification is not simply linear and open but curved and closed: the sceptic argues that in the long run the search for justification for our premises cannot escape a circular appeal to the same, inevitable but already challenged standards of rational acceptability, thus turning back on itself.

In an article on the logic of the fallacy of *petitio principii*, Woods

¹² L. Wittgenstein, *On Certainty* (Oxford: Blackwell, 1969), § 250 and § 268.

¹³ W. Sellars, *Science, Perception and Reality* (London and New York: N. Y. Humanities Press, 1963), p. 169, cited by R. Rorty in *Philosophy and the Mirror of Nature* (Princeton: Princeton U. P., 1980), pp. 140-1.

and Walton have distinguished between two broad conceptions of circular reasoning:

- 1) the *equivalence conception*: an argument is said to be circular where the conclusion is tacitly or explicitly assumed as one of the premises, that is, where the conclusion is equivalent, or even identical, to one of the premises;¹⁴ and
- 2) the *dependency conception*.

The authors incline to believe that (1) may be just a special case of (2)¹⁵ and I would reinforce the point by saying that in an epistemological context, such as the present, a loosening of the isomorphic relation between premise and consequence, and therefore the reduction of (1) to (2), is virtually inevitable. According to the latter, a *petitio principii* is reducible to an argument where some premise *p* depends, more or less in the long run, on the possibility of maintaining the conclusion *q*, and thus it is equivalent to an argument where one cannot *know* that *p* is true without *knowing* that *q* is true:

one may know the truth of *q*, as a matter of fact, but one must have some *other* means of knowing the truth of *p*—that is, some means independent of *q*.¹⁶

If we apply the previous diagnosis to the morphology of our problem, it seems now that the *petitio principii*, in which the justification of TK is essentially caught when it tries to solve objections^{L2}, is not a fallacy of *formulation*, but rather one of *contents*.¹⁷ The process is fallacious because it ceases to present an effective solution to objections^{L2}, not because it fails to be sound. Given this interpretation of the nature of the problem, the sceptic can conclude that, since it rep-

¹⁴ J. Woods and D. Walton "Petitio Principii", *Synthese* 31 (1975), pp. 107-127, quotation from pp. 107-108.

¹⁵ *Ibid.*, p. 109.

¹⁶ J. Woods and D. Walton, "Circular Demonstration and Von Wright-Geach Entailment", *Notre Dame Journal of Formal Logic* 20 (1979), pp. 768-772, quotation from p. 769.

¹⁷ This was already Aristotle's position, cf. *De Sophisticis Elenchis*, 165^b.25.

resents a circular argument in favour of the epistemic value of certain ?ps^k, any TK

systematically lacks the power to escalate the credence of its conclusion for those to whom it is directed¹⁸

in our case the sceptic himself.¹⁹ The point deserves particular attention because it is not unusual to find epistemologists who mistake the sceptical request for a final justification of our premises, or the *petitio principii* itself in which the epistemology can be caught, for a logical error or sometimes even a self-contradiction.²⁰

Thanks to the previous analysis, we may now adopt the image of a

¹⁸ J. Woods and D. Walton, "Petitio Principii", p. 122.

¹⁹ There is general agreement on this point, cf. H. Palmer, "Do Circular Arguments beg the Question?", *Philosophy* 56 (1981), pp. 387-394, especially the references given in note 1, and K. Wilson, "Circular Arguments", *Metaphilosophy* 19 (1988), pp. 38-52.

²⁰ See for example what Popper says in "Die beiden Grundprobleme der Erkenntnistheorie" ed. by J. C. B. Mohr (Tubingen, 1979). The confusion arises in L. Nelson, *Progress and Regress in Philosophy, From Hume and Kant to Hegel and Fries*, ed. by J. Kraft, tr. by H. Palmer (Oxford: Blackwell, 1971), vol. II, pp. 157-245 and again in his "The Impossibility of the 'Theory of Knowledge'", Eng. tr. in *Socratic Method and Critical Philosophy, Selected Essays*, tr. by T. K. Brown III (New York: Dover, 1965), p. 189. Two other examples are P. D. Huet, *Censura Philosophiae Cartesianae* (Paris 1689), Caput quartum, X, p.135—who defines the Cartesian circle as "asylogison [asylogiston?]", that is illogical or formally invalid—and K. O. Apel, who writes that the *petitio principii* contained in Albert's "Munchhausen's trilemma" is logically faulty, cf. p. 240 of his "The Problem of Philosophical Fundamental-Grounding in Light of a Transcendental Pragmatic of Language", *Man & World* 8 (1975), pp. 239-75. The kind of confusions to which the misunderstanding of the nature of the *diallelus* may give rise to is exemplified by V. Hoesle, who attempts to demonstrate the validity of objective idealism by means of an indirect proof which is based on a negative dialectic made possible only by the mistaken interpretation of the logical nature of the metaepistemological problem, cf. his "Begründungsfragen des objektiven Idealismus" in *Philosophie und Begründung*, Forum für Philosophie, Bad Homburg (Frankfurt: Suhrkamp, 1987), Italian tr. by Giovanni Stelli (Milano: Guerini e Associati, 1991).

*vicious spiral*²¹ constituted by the levels $\mathcal{L}1/\mathcal{L}4$, to describe the problem through which we enter into a loop. We have seen the sense in which objection ^{$\mathcal{L}4$} forces us to conceive the top of the spiral as bent down to the basic level of $E^{\mathcal{L}1}$ (*circulus in probando*), never ending (*regressus and infinitum*), or arbitrarily cut off. The image of the spiral is useful to convey the sense both of a hierarchy of levels of discussion and of an escalation of the sceptical questioning. The conclusion of this spiral of arguments is that, if the set of knowledges is assumed to be empty at the beginning of the investigation, it is very difficult to ascertain how it can be “filled” with instances of knowledge without begging the question of the justification of this procedure.

4.2. *The Metaepistemological Nature of the Problem*

So far I have been talking about levels of discourse and, in so doing, I have implicitly endorsed the hypothesis that the charge of circularity is a metatheoretical problem concerning a theory of knowledge and the justification of its fundamental premises, that is $\mathcal{L}3$. I now mean to reinforce this tenet explicitly by contending that the foundationalist problem does not immediately concern the primary level of the linguistico-doxastic activities of a knowing subject and their consequent findings, scientific knowledge included. This further step requires a preliminary clarification), since so far I have simplified the matter by implicitly adopting the dichotomy between the linguistico-doxastic phenomena of a human knowing subject at $\mathcal{L}1$ and epistemology at $\mathcal{L}3$. This has allowed me to leave the problem of the collocation of scientific knowledge within the sceptical spiral untouched. Now, in order to understand the similarities between Wil-

²¹ I have taken the image from W. W. Hollister, “Conduct and the Circle”, *Journal of Philosophy* 50 (1953), pp. 57-69, who uses the iconography of the spiral within the context of the discussion of patterns of vicious circularity of events, in order to convey a general sense of reinforcement of the circular structure.

liam Alston's and Karl Popper's interpretations of the metaepistemological problem, it is necessary to recall the contrast, brought out in chapter two, between a historically determined, an arbitrarily chosen and an abstract human knowing subject. If we interpret our human knower as S (the abstract knower) this allows us to consider any body of knowledge (for the special case of cognitive sciences see below) as the outcome of human epistemic activities. Then we may understand empirico-mathematical sciences too, no matter how complex, as instances of knowledge to be included in $\mathcal{L}1$. The historical restraint finally renders the dichotomy epistemology vs. S' linguistico-doxastic phenomena adequate and enables us to maintain unchanged the further distinction between metaepistemological and epistemological problems. Problems concerning instances of knowledge at $\mathcal{L}1$, like physics, cannot properly be defined as *metaepistemological* and I shall now argue that objection^{L4} is a problem challenging only a philosophy of knowledge and therefore counts as a metaepistemological problem.

A poor grasp of the nature of the *diallelus* has often resulted in confusion of the metaepistemological issue, i.e. the justification of the premises of a theory of knowledge, with an epistemological problem, i.e. the justification or foundation of S' linguistico-doxastic phenomena, sciences included. On the one hand, I have remarked that both the common habit of talking of philosophers and their theories of knowledge interchangeably, and the tendency to present conclusions concerning the nature of knowledge as if they were Mary's conclusions about e.g. her beliefs, may have contributed to this lack of clarity. On the other hand, it must also be recognised that, if a theory of knowledge could be provided which does not beg the fundamental question of its own justification, then we would also be able to provide a justification for $\mathcal{L}1$ -knowledges; and conversely, if any theory of knowledge is invalidated by the "original sin" of a fundamental *petitio principii*, then the sceptical challenge at $\mathcal{L}4$ puts into question the only theoretical path available in order to answer objections^{L2} arising with respect to the validity of knowledge. That

the charge of circularity is not an immediate problem for S' knowledges at $\mathcal{L}1$, i.e. for the development of linguistico-doxastic phenomena including scientific knowledge, can, I trust, be established on the basis of at least two considerations, one hinging on Alston's distinction between being justified and being able to justify,²² the other based upon Popper's discussion of "Fries' trilemma". Let us look at each in turn.

4.2.1. *Being Justified and Being Able to Justify*

S could in fact be justified in assuming the validity of P as an instance of knowledge, even if S him/herself is not able to justify P correctly. Formally speaking, this is tantamount to saying that an actual and eventually inescapable circularity in the justification of P does not render contradictory the fact that P may be a highly acceptable statement, perhaps supported by features of the world that a single individual or a scientific community may never be able to state in a non-circular way. Such a simple logical truth—"in fact not-p unless c"—does not exclude that "it is logically possible that p without c"—may be extended to include a less subject-orientated context. Alston's distinction enables us to see that, even if a science cannot ground its first premises without itself being caught in a vicious circle, this does not eliminate the logical possibility that such premises may be justified after all. Suppose, for the sake of argument, that a premise consisting in the anti-Goodmanian principle to the effect that colours do not vary according to time (i.e. it is not the case that what is blue now has the property of being blue until time t_n and

²² Cf. W. Alston, "Epistemic Circularity", *Philosophy and Phenomenological Research* 47 (1986), pp. 1-30. Alston's epistemological essays are collected in *Epistemic Justification* (Ithaca-London: Cornell U. P., 1989). The point is also emphasised by J. Barnes in *The Toils of Scepticism* (Cambridge: Cambridge U. P., 1990), pp. 31-35. For a similar distinction cf. Apel, "The Problem of Philosophical Fundamental-Grounding in Light of a Transcendental Pragmatic of Language", pp. 248-9.

green afterwards) could not be supported in physics without appealing to other principles that presuppose its validity. Even if this were the case, it would still be logically possible to suppose that the premise is justified on a basis thoroughly independent of our capacities of defending it in a non-circular form.

Alston's distinction, however, establishes only a logical possibility. While its application may be satisfactory in so far as S' linguistico-doxastic phenomena are concerned, the case becomes much more controversial when we take into account a theory of knowledge. If $\mathcal{L}1$ is not the level where we provide the justification for our knowledge and its own premises, but delay it until a later stage by showing that the sceptical argument is only negative and not positively conclusive, then the development of a theory of knowledge at $\mathcal{L}3$ is also motivated by the necessity of presenting valid reasons which let us consider certain beliefs to be proper instances of knowledge at $\mathcal{L}1$. At that level, it is no longer sufficient to say that the theory could be justified in assuming its premises by some unknown, inexplicable state of affairs. It follows that Alston may be too optimistic when he seems to be convinced that the dichotomy could play a conclusive part in resolving objection^{L4} (but see the quotation given in § 5.1, in which Alston appears more sceptical). He maintains that the vicious circle is escaped because

so long as there *is* such a [valid epistemic] principle [that applies to p], that belief *is* justified whether I know anything about the principle or not and whether or not I am justified in supposing that there is such a principle. [...] To be justified in that higher-level belief ["I am justified in believing that p"], there has to be a (higher-level) epistemic principle of justification that applies in the right way to the belief in question. But again, all that is required is the *existence* of such a principle. For the justification of that (first-order) higher-level belief, it is not necessary that I be justified in supposing that there is such a principle; only that there be such.²³

²³ W. P. Alston, "Level-Confusions in Epistemology", in P. A. French, T. E. Uehling and H. K. Wettstein (eds.), *Midwest Studies in Philosophy, V*:

If we interpret the sceptical objection as if it concerned only $\mathcal{L}1$, I suppose we should agree with Alston. The claim that we could be justified—although it may seem an ontological step into the realm of what is the case and therefore an answer in terms of “I am not yet unjustified in believing that p because it could be the case that I am justified in believing that p ”²⁴—is in fact a perfectly acceptable position, based on what is a logical feature of the argument. Demonstrating at $\mathcal{L}1$, as the sceptic seems to be able to do, that I cannot justify my beliefs unless I beg the question, is not equivalent to demonstrating that therefore I am not justified in holding such beliefs and that I may not be able to show at $\mathcal{L}^x$ that I am justified at $\mathcal{L}^{x-1}$. How-

Studies in Epistemology 5 (1980), pp. 135-150, quotation from p. 148. It is worth noticing that in the article Alston is concerned with the analysis of beliefs of a single subject, endorsing a classic Cartesian orientation within which he may not be interested in objection²⁴; on the other hand, on p. 147 he quotes Sextus Empiricus and refers to the *diallelus* (*Outlines of Pyrrhonism* II. 20) as a clear formulation of the problem he is discussing in that section of the article, and we have seen in the previous chapter that the *diallelus* is the classic source of the formulation of objection²⁴ in the history of epistemology. A recent example of the subtle level reached by the debate on the nature of justification, foundationalism, coherentism, reliabilism and Gettier-type definition of knowledge which is strictly connected to Alston's position is given by the discussion between D. Shatz, “Foundationalism, Coherentism and the Levels Gambit”, *Synthese* 55 (1983), pp. 97-118, and J. A. Keller, “Foundationalism, Circular Justification and the Levels Gambit”, *Synthese* 68 (1986), pp. 205-212.

²⁴ Because of the reference to what could be the actual case the attempt to extend the fruitfulness of the dichotomy from $\mathcal{L}1$ to $\mathcal{L}3$ leads to another version of the Cartesian circle: of course *if* there is a veridical God I am justified in trusting my clear and distinct ideas. But such a possibility is not sufficient to show that in fact I am justified, and to leave it undecided is equivalent to leaving undecided whether or not a proposition, which is certain in the internal world of my consciousness, is also true with respect to the external world of the universe. Hence, in order to defend the identity “certainty = truth” I should be able to demonstrate that there is such a God, but if I ground the demonstration of his existence on my clear and distinct ideas I am caught in a circle.

ever, the solution works at $\mathcal{L}1$ precisely because the logical distinction indicates that the sceptic is not yet right and that we still have a possibility. It is like a promissory note introduced by means of clauses such as “provided” or “so long as”. These are conditionals which have an ontological import, should be formulated in terms of possibility, and sooner or later must be honoured if our position with respect to the nature of knowledge is to avoid lapsing into a *petitio principii*. If I may enlarge on the analogy, I would say that, although one could borrow money from friends and banks and live a lazy, if not happy, life until one dies, this solution is clearly inapplicable at the macroeconomic level of human society. A theory of knowledge, if possible at all, works at the level where such conditionals must be transformed into a logical/causal connective (a “because ...”) and the latter supported by showing that the “can”-clause pin-points an actual fact, either logical or empirical. An appeal to the logical dichotomy “being justified/being able to justify” can only postpone the elaboration of a theory of knowledge, but if the delay is *ad infinitum*, then we are losing the game and must admit that, when explicitly required to, we are not able to justify our position. This is also the sense in which Hume must be interpreted when he remarks that:

[...] as you cannot proceed after this manner, *ad infinitum*, you must at least terminate in some fact, which is present to your memory or sense; or must allow that your belief is entirely without foundation.²⁵

As I said, we shall see in a moment that, in another context, this also seems to be Alston’s position. The theory should be able to show explicitly that it is in fact justified: that a theory of knowledge proceeds by virtually presupposing e.g. certain statements as instances of knowledge, amounts to saying that we can take certain $?ps^k$ to be Ks because we take certain $?ps^k$ to be Ks , which is hardly an answer to the sceptical question. Note that I am not asserting that there must or might be other possible answers; we saw that, according to

²⁵ D. Hume, *Enquiries Concerning the Human Understanding*, (Oxford: Clarendon Press, 1975), p. 34.

Chisholm, for example, there are not and the only solution is to beg the question. Rather, I am holding that, as Moritz Schlick neatly put it,

epistemology is not as fortunately situated as the individual sciences, which can leave the verification of their foundations to a more general discipline; the theory of knowledge is concerned precisely with the ultimate presuppositions of *all* certainty. We can hope to overcome universal doubt only if we strip the difficulty of its wrappings and face it calmly.²⁶

4.2.2. *The Sceptical Dynamics of Falsificationism*

The second group of considerations I mentioned above is slightly more complex. It is suggested by Popper's "solution of Fries' trilemma"²⁷ and correlates with the diachronic development of S' linguistico-doxastic phenomena or sciences, on the one hand, and of a theory of knowledge on the other. As before, we must discern between two different questions:

- whether we may establish that objection^{L4} is not a problem concerning $\mathcal{L}1$ -instances of knowledge; and
- whether the same considerations suffice to show that objection^{L4} is not a problem for a theory of knowledge at $\mathcal{L}3$ either.

The first question can easily be settled. We know from chapter three that Mary's set of beliefs, for example, is continuously changing: she may never reach a final stage at which she must reorganise all her possible knowledge. Her beliefs are formulated in a contingent and historically temporal sequence and moment by moment she may implicitly and automatically adopt one or the other version of the

²⁶ M. Schlick, *General Theory of Knowledge*, Eng. tr. by A. E. Blumberg (Wien, New York: Springer-Verlag, 1974), p. 118.

²⁷ K. R. Popper, *The Logic of Scientific Discovery* (London: Hutchinson, 1959, 1962, first published in 1934), Chap. V.

criterion C, according to her needs.²⁸ Her beliefs are to be interpreted as subject to a continuous control of feed-back, internal consistency and external adequacy and, without a finally-fixed structured body of potential knowledges, it is not clear whether and in what sense the charge of circularity could be directed against her procedures. These observations about Mary's linguistico-doxastic phenomena can readily be extended to S, and thus to specific sciences like physics, biology and so on. In so far as a scientific community keeps these disciplines under continuous development, the problem of circularity can be dissolved by leaving their premises open to an endless process of revision. It turns out that only a systematic and dogmatic (in the Sextian sense of the term) study of the nature of knowledge at $\mathcal{L}3$ can be meaningfully and radically threatened by the accusation of circularity, not the endless flux of developing knowledges at $\mathcal{L}1$. The fact that we leave open the possibility of re-assessing the validity of the premises of physics, for example, simply impedes the application of the sceptical argument. As long as we keep the Peircean road of inquiry open there is no way for the sceptic to raise his metatheoretical objections and catch us in a *petitio principii*. To sum it up with an image: something elastic cannot be fractured.

Could we not adopt the same sort of reasoning in order to solve objection⁴⁴ at $\mathcal{L}5$? Suppose we assume a dynamic position with respect to $\mathcal{L}1$, e.g. regarding S' beliefs or the nature of physics, and therefore eliminate the problem of a fixed foundation for knowledges at that primary level. Once such a dynamic principle is accepted in terms of a falsificationist criterion (which works as the principal premise of our theory of knowledge), we know that objection⁴⁴ holds that such a premise is unjustified. The principle which attests that any instance of knowledge should be considered hypothetical and open to revision, itself aiming to be a member of the set of knowl-

²⁸ A similar position is taken by R. Chisholm in his *Theory of Knowledge*, second edition (Englewood Cliffs, New Jersey: Prentice-Hall International Editions, 1977), p. 121.

edges, is for the sceptic equally unjustified and open to revision. The dynamic solution of objections^{L2}, inserted at $\mathcal{L}3$, faces the sceptical objection^{L4} as in all the other cases. A Humean sceptic could argue, for example, that the falsificationist premise itself, on which the theory of knowledge under consideration is based, is highly questionable since some beliefs seem to be unrevisable after all, without being for this reason true instances of knowledge. We shall see that, in terms of the relation between certainty and truth, this is a possible interpretation of the Cartesian circle. It is at this point that, to answer the request for a further justification of the assumption of the falsificationist premise, one may be tempted to re-appeal to a falsificationist solution at $\mathcal{L}5$ in order to solve objection^{L4} dynamically, so as to obtain at $\mathcal{L}5$ the same result in favour of $\mathcal{L}3$ against objection^{L4} which has previously been reached at $\mathcal{L}3$ in favour of $\mathcal{L}1$ against objections^{L2}. A universal quantifier is prefixed to the first epistemological principle without any limit to the hierarchical orders and, since all knowledge at any level now becomes hypothetical, there is no need for a justification of the allegedly first epistemological principles endorsed by the system.

Is such a strategy really successful? I doubt it. Any epistemic statement can be hypothetical and yet be put into question apart from the epistemic and epistemological principle itself which says so. If this (theory-of-types-like) difference of levels is not respected and we re-apply our dynamic solution to itself in order to answer objection^{L4}, we are led to admit at $\mathcal{L}5$ that our $\mathcal{L}3$ -theory of knowledge, hence our $\mathcal{L}1$ -instances of knowledge, may not be open to revision after all. At this stage, the validity of the falsificationist principle, i.e. the premise of our theory of knowledge, eliminates itself. Although the metaepistemological and falsificationist principle may claim to have reached a level of adoption exterior to the dialectic of doubt and certainty—that is, although the principle may aim to present itself as the framework within which the epistemological discourse is developed, but which does not belong to it—it seems uncontroversial that the extension and hence the self-referential nature of the princi-

ple implies that there is no $\mathcal{L}\chi$ -level, i.e. there is no a-historical, spectator's point of view, as Dewey would call it, which is not subject to the falsificationist conclusion itself reached at $\mathcal{L}\chi^1$. The occurrence of an objection²⁶, parallel to the one expounded at $\mathcal{L}4$, against the justification of our $\mathcal{L}5$ -solution, leads us to a further, dynamic solution and so on *ad infinitum*. The spiral can never enable us to establish at $\mathcal{L}\chi$ whether instances of knowledge at $\mathcal{L}\chi^1$ are really open to revision or not. Thus, if we try to adopt a dynamic solution of the metaepistemological problem the final consequence would not be simply, as the dynamist is inclined to think, that all human knowledge—i.e. all instances of knowledge at $\mathcal{L}1$ —is open to revision (a very reasonable point, given our human fallibility) but that we do not even know whether or not the beliefs that we call knowledge are in fact open to revision, without *merely assuming* that they are in fact open to revision. Lakatos wrote that

to the indefatigable sceptic who will ask again: "How do you *know* that you improve your guesses [i.e. your open-to-falsification metaprinciples]?"", we may answer that we *guess*, and that "there is nothing wrong with an infinite regress of guesses".²⁹

The point which needs to be made equally clear now is that there is nothing epistemologically right either. Once it has been admitted that *we were guessing about the fact that we were guessing*, we cannot be certain that what we have in front of us is not just a pointless regress of guesses which falsify each other in an infinite and rather worthless escalation, thoroughly independent of the real state of the world. By adopting the dynamic spiral caused by the self-referential principle "all knowledge is hypothetical, including this principle" we end up by having no conception of knowledge at all. Whatever theory is so defended becomes epistemologically non-informative, since the adoption of the dynamic solution at the metaepistemological level

²⁹ Cf. I. Lakatos, "Infinite Regress and Foundations of Mathematics", in *Philosophical Papers*, ed. by J. Worrall and G. Currie, (Cambridge: Cambridge U. P., 1978), vol. II, pp. 3-23, quotation from p. 10.

empties the theory of knowledge of its positive content, erases certainty at any level and finally eliminates itself like the sceptical procedure of συμπεριγράφειν.³⁰

Two further consequences deserve to be highlighted. Once the dynamic solution has been adopted, there is still a possible position for the dynamist to take in connection with the *regressus*, but it represents an obvious withdrawal from the purpose of advocating the possibility of a theory of knowledge which defends positive theses about the nature of knowledge. Upon realising that his dynamic solution of objection⁴⁴ puts him in a situation in which he no longer knows whether, or no longer has good reasons to maintain that, all knowledge at any level is open to revision, the dynamist may be ready to adopt an ethical basis for such a transformation. The endless process itself may be transformed into the aim, that is into the final goal of the epistemic enterprise. Thus, the constant search for knowledge and falsification may be converted into a form of critical rationalism, a sort of ethics of the Enlightenment without certainties. At this point, the practical outcome of the critical enterprise is virtually indistinguishable from the Pyrrhonist option and the debate between the dynamist and the sceptic becomes only a matter of the ethical and epistemologically unjustified commitments of the observers.³¹ The dynamist will keep on ascending the levels of falsification, confident in the ethical value of the enterprise. He will be inclined to see the endless process of criticism as an example of an open-minded and progressive attitude in relation to the growth of our set of beliefs. The Pyrrhonist, who never believes he has found the object of his search, unlike the Dogmatic or Academic philosopher,

³⁰ Cf. Sextus Empiricus, *Outlines of Pyrrhonism* I. 14, 206 and II. 188 and *Against the Logicians*, II. 480.

³¹ For a deontological move similar to Chisholm's Cartesian internalism, see A. Plantinga, "Positive Epistemic Status and Proper Function", in J. E. Tomberlin (ed.), *Philosophical Perspectives—2 Epistemology* (Atascadero CA: Ridgeview P.C., 1988), pp. 1-50, § 1.

will also keep on searching,³² because scepticism in itself is a dynamic ability (δύναμις),³³ but with no illusions, even about the epistemological fruitfulness of the process, if we exclude the teaching of scepticism itself. So a pessimistic observer such as Sextus Empiricus³⁴ will be entitled to maintain that we are like men searching for gold, or shooting at a target in a dark room: no matter how long the search or the shooting proceeds, it is *pointless* because in principle there is no way to establish whether any of us has found a nugget or hit the mark. To be able to show that so far all of us have been unsuccessful is not sufficient to make any difference between the two attitudes. Of course, for exactly the same reasons the dynamist can always reply that the sceptic can not demonstrate that we did not find a nugget or hit the mark. But to the perpetually-searching dynamist, the sceptic may finally rejoin that, for the sake of our peace of mind, it may profit us more to abstain from the search for knowledge.³⁵ Rolling Sysiphus' epistemological stone can only be a punishment, not a choice.

The similarities between the dynamic and the sceptical strategy further clarify the fact that the dynamic approach, though fruitful in the case of S' linguistico-doxastic phenomena, does not provide the basis for a successful defence of the validity of a theory of knowledge. Our first question was whether a dynamic consideration could prove that objection^{L4} is not a problem for $\mathcal{L}1$ -instances of knowledge, and the answer is yes. The second question was whether the same considerations may solve objection^{L4} and the answer is now in

³² Sextus Empiricus, *Outlines*, I.1-4.

³³ *Ibid.*, I.8

³⁴ *Ibid.*, I.52 and II.325.

³⁵ In its ethical development, the form of falsificationism I have sketched joins forces with the contemporary interpretation of the notion of justification in deontological terms, which has recently won rather wide consensus among analytic philosophers. This may not be pure chance: both traditions have inherited the problems in the matter of justification left unresolved by the traditional theory of knowledge.

the negative, unless we accept that we should give up the project to establish a theory of knowledge *tout court*. Adopting a dynamic strategy involves a renunciation of the project of a theory of knowledge and thus, indirectly, an acceptance of sceptical abstention from an appraisal of the nature of knowledge as a reliable way of dealing with the external world which could be more or less justified. The fact that such a metatheoretical dynamic solution amounts to an admission of the correctness of the sceptical objection^{L4}, and therefore to a departure from the classic epistemological enterprise, is not and cannot be in itself a decisive argument against the dynamist attitude. The never-ending dynamist evasion of the problem remains a wholly admissible alternative for anyone who is not primarily interested in advocating the importance and the validity of a theory of knowledge at a metatheoretical level. But it is a way of making it clear that, if the aim is to justify a theory of knowledge, the dynamist strategy is inapplicable, since it solves objection^{L4} by dissolving the very possibility of a theory of knowledge. No wonder that there is no problem at the metaepistemological level, for there is no siege without a castle. Of course, a completely different question is whether or not the dynamist solution may be the only available alternative to total scepticism and therefore whether it should be chosen as the lesser evil.

The last few paragraphs show that there is an important point missed by the dynamic solutions, namely that a theory of knowledge ranks at the theoretical level, whereas hypotheses about the nature of knowledge must be elaborated without necessarily claiming to have reached valid and definitive conclusions, but certainly in the hope that one may. In order to achieve the latter, a theory must in principle be defensible against the sceptical attack. Its premises must be liable to some sort of justification, although perhaps one which satisfies rather lower standards than those settled on by Descartes. If a theory of knowledge is possible at all, it must have a potentially definitive nature, that is it cannot rely on a never-ending regress but must aim at being based on explicit premises which are in principle maximally justified and safe from the sceptical challenge. This is not tanta-

mount to saying that a philosophy of knowledge, in the old-fashioned sense of the expression that we have inherited from modern philosophy, leads to, or even aims at, a repression of epistemic advances by fixing an ultimate body of justified instances of knowledge. On the contrary, a philosophy of knowledge aims at the detection of an ultimate basis on which it might be possible to remove doubts about the validity of the rest of our knowledge: it goes to the foundations of our knowledge to check their purpose and stability, as it were. If successful, the epistemological enterprise is far from being conservative, and is directed to an increase in our confidence in the positive nature of our knowledge and in the development of epistemic research. Likewise, the definitive nature of a philosophy of knowledge should not be understood as if the goal were that of identifying the only conceivable ground on which we may justify the possibility of knowledge, as the result of a valid relationship with the external world. Although one successful philosophy of knowledge is all we need for our task, this is no reason to deny that there may be a plurality of approaches to the justification and explanation of our knowledges, all equally satisfactory, and that each approach might be epistemologically tolerant with respect to the other alternatives. To state that a theory of knowledge must aim at having a definitive nature is tantamount to saying that an enlargement of the dynamic solution from instances of knowledge at $\mathcal{L}1$ to the foundation of a philosophy of knowledge at $\mathcal{L}4$ corresponds to acceptance of the sceptical attack. Either a philosophy of knowledge achieves, or at least hopes to be successful in providing, a definitive ground for its own justification, or there is no general philosophy of knowledge, no *Erkenntnistheorie*, at all. I shall, then, conclude this section by stressing that if there is an *epistemic circularity* of $S' \text{ ?ps}^k$ identifiable at $\mathcal{L}2$, in any case it can be of no harm to the epistemic validity of $S' \text{ ?ps}^k$. But the *epistemological circularity* of a theory of knowledge, detected at $\mathcal{L}4$, could radically undermine the metatheoretic grounds on which the theory itself has been developed and, if it cannot somehow be neutralised, it deprives the theory itself of its con-

vincing power with respect to objections^{L2}. If the problem of the justification of a theory of knowledge cannot be prevented, solved or circumvented, there seems to be no alternative to critical acceptance of a more or less radical form of scepticism about the ultimate capacity of human knowledge to justify itself as a reliable medium that provides the knowing subject with a successful method for dealing with the known object. One may note that nowadays such a meta-epistemological scepticism is rather widespread among philosophers of science, who seem to be ready to accept a dynamic approach, often leading to forms of relativism, in order to postpone the problem of justification of *L1*-instances, no matter whether this implies the abandonment of the project for a general theory of knowledge at *L3*. Likewise, scientists may readily adopt either broad pragmatic bases for their theories or unjustified metaphysical presuppositions. In either case, a philosophy of knowledge is considered dispensable.

5. Features and Limits of Anti-sceptical Strategies

Having discussed the necessity of establishing a foundation for a theory of knowledge, the time has come to give some indications about how it may be done. Therefore, in this last section we shall consider the negative conditions which further limit the possibility of solving the *diallelus*. They will bring us to the next chapter, where a more positive approach will be adopted.

5.1. The Diallelus and the Fallacy of Secondary Effects

As regards the distinction introduced above between epistemic and epistemological circularity, William Alston has written that

so far as epistemic circularity is concerned, I can justify and be justified in taking the source [of knowledge] to be reliable and to be a source of justification. But as soon as I direct a critical scrutiny on this happy state of affairs it disappears before my eyes; it eludes my reflective grasp. When I try to be fully critical about my justification I very

soon run into logical circularity. I can justify, or be justified in, accepting either particular perceptual propositions or a general principle of perceptual justification or reliability, only by practically accepting that principle of reliability. But in the enterprise of seeking to answer critical questions whenever they arise one is driven to convert that practical justification into theoretical justification. And that is where we run into logical circularity.³⁶

In the light of the previous diagnosis of the problem, Alston's remarks suggest the possibility of a comparison between the apparently inescapable metaepistemological circle and the wider phenomenon discussed by Jon Elster under the heading of the fallacy of secondary effects.³⁷ Such fallacies and the possibility of solving them have largely been studied within the context of psychotherapeutic strategies by Gregory Bateson and the School of Palo Alto.³⁸ Two examples which are often given as illustrations are Peter, who cannot solve his problem of insomnia if he attempts to convince himself that he should try to sleep, and Mary, who cannot be spontaneous if she wants to be, for if she wants to be spontaneous she immediately becomes affected. The similarity between such *Catch 22* situations³⁹

³⁶ Cf. Alston, "Epistemic Circularity", p. 24. As is clear from this paragraph, I largely agree with the analysis of the problem given by Alston in this article, although I would follow Chisholm and Barnes in stressing that the metatheoretical circularity, seemingly underlining any theory of knowledge, is one of the most important problems faced by epistemologists, one which requires a solution as radical as the sceptical challenge.

³⁷ Cf. J. Elster, *Sour Grapes. Studies in the Subversion of Rationality* (Cambridge: Cambridge U. P., 1983), Chap. II. Surprisingly, despite the large amount of references and examples, Elston does not mention the sceptical issue. See also P. Watzlawick, J. Helmick Beavin and Don D. Jackson, *Pragmatic of Human Communication, A Study of Interactional Patterns, Pathologies and Paradoxes* (New York: Norton, 1967), Chap. VI.

³⁸ An interesting introduction to the problems connected with self-reference in the social sciences is given by B. Giacomini in *Conoscenza e Riflessività* (Milano: Franco Angeli, 1990).

³⁹ *Catch 22* is defined as "a supposed law or regulation containing provisions which are mutually frustrating, a set of circumstances in which one

and our metaepistemological problem lies in the fact that they all share the same circular pattern. Their morphology is such that attempts at a direct solution—that is, attempts to find a solution within the context settled by the problem itself, like trying to sleep or to be spontaneous by an act of will, or in our case to provide some final justification which in turn may not be in need of further support—turn out to be part of the very problem addressed. Thus, such direct approaches are at best fruitless and in the worse case may even result in a progressive reinforcement of the vicious circle established by the self-referential logic of the issue at stake. *Agrescit medendo*, “the disease worsens with the treatment”, as Virgil neatly put it. In our case, a direct solution of the *diallelus* strives to exploit precisely that justificatory element which is one of the chief conditions that make the problem possible, and therefore we can hardly expect it to succeed in escaping the vicious circle summarised by the famous question *quis custodiet ipsos custodes?*

The nature of the fallacies of secondary effects is such that their resolution can be pursued only *indirectly*, if at all. In the example given above, Elster reminds us that Peter may fight his insomnia by following the medical advice of registering the various symptoms he feels while being sleepless; the solution will work provided Peter is not aware that his doctor is not interested in his report but actually wishes to provide him with an indirect way to get some sleep again. The reader may well be acquainted with another example: sometimes we can loosen a rusty screw only by hammering it in a bit further. However, by acknowledging such an indisputable resemblance between the fallacies of secondary effects and our metaepistemological problem I do not mean to lay down the basis for a psychologistic ap-

requirement, etc., is dependent upon another, which is in turn dependent upon the first” (*Oxford English Dictionary*). The expression has become common in American English after it appeared as the title of J. Heller’s novel *Catch 22* (1961), where we read that: “There was only one catch, and that was catch 22 ... if he flew them [more missions] he was crazy, and didn’t have to, but if he didn’t want to then he was sane and had to”.

proach. All I intend to propose is that, if there is a solution to the latter, its logic might be equally oblique. Given the morphology of the problem and the basic ubiquity of the notion of justification at any level of knowledge and epistemological analysis, it seems that there is no way of dealing with the *diallelus* successfully unless we modify the conceptual environment which renders the foundationalist problem possible. Reflection on the *diallelus* suggests that we should try a different approach, removing some of the elements forming the framework within which the question of the justification of a theory of knowledge can actually arise. As with the fallacies of secondary effects, it seems totally pointless to insist on searching for a straight answer, accepting in our case the very same justificatory logic which prompts us towards the impossible quest for an unshakeable foundation. An indirect manoeuvre suggests itself as a far better way of dealing with the issue, a manoeuvre that may interact with the foundationalist question itself by attempting to alter it before answering it.

5.2. Husserl's erkenntnistheoretische Prinzip and the Naturalistic Fallacy

Once it is determined that a solution of the metaepistemological problem, if one is possible, must be indirect and must tackle its roots, we need to characterise such indirectness more precisely. Our first step is to show what a direct solution is.⁴⁰ Any solution that violates

⁴⁰ An important difference should be made explicit here. Obviously the School of Palo Alto stresses the importance of the positive results obtained, i.e. the number of patients cured. Such a pragmatic orientation, thoroughly justified in the context of psychotherapeutic practices, makes Paul Watzlawick, John Weakland and Richard Fisch emphasise the fact that their indirect approach disregards any investigation into the psychological causes that motivate a certain pathological behaviour. They do not seek an insight into the reasons behind such behaviour; but are satisfied if we can discover an indirect modification of the situation which will put an end to it. Therefore they generally speak of *changes* to or *reformulation* of problems rather

what Husserl called the *erkenntnistheoretische Prinzip* (the gnoseological principle) is a direct (alleged) solution of objection $\mathcal{L}^4$. This principle represents the other side of the methodological process of affixing an index of questionability to every member of the set of potential expressions of knowledge $\{\Sigma_1, \Sigma_3\}$. It posits that the justificatory ground of a theory of knowledge cannot be provided by other instances of knowledge as such. According to the terminology adopted so far, a solution of the metaepistemological problem cannot be direct in the sense that one cannot hope to provide a satisfactory answer to objection $\mathcal{L}^m$ by anchoring a theory of knowledge at $\mathcal{L}^{m+1}$ to some instances of knowledge extracted from $\{\Sigma_1, \Sigma_3\}$ at any previous level $\mathcal{L}^{m-n}$ for $m \geq 4$, $m > n$ and $n \geq 1$.

The infringement of Husserl's *Prinzip* can be considered of a piece with the so-called naturalistic fallacy in ethics. According to Richard Rorty⁴¹ such a fallacy is committed by any purely descriptive approach, like Locke's, to the problem of justification. As he writes⁴²:

than *solutions* to them. Evidently, the purely theoretical context within which the debate over objection $\mathcal{L}^4$ takes place renders this pragmatic approach unsatisfactory (it is to be interpreted as the situation at $\mathcal{L}^1$ so well described by Alston: we are still in the situation of knowing, although we do not know why we know. The fact that we know is not yet a solution to our problem, although, *mutatis mutandis*, it would be a solution from the therapeutic point of view). To give a concrete example, the pragmatic approach would not consider a transcendental solution a possible option, since the latter should be considered under the heading of a search for insight. This explains why I do not follow these authors in their suggestion that all indirect solutions (change of the second type) are in one sense or the other inversions of *other previous solutions* (changes of the first type), cf. P. Watzlawick, J. Weakland and R. Fisch, *Change—Principles of Problem Formation and Problem Solution* (New York: Norton, 1974), *passim*.

⁴¹ Rorty, *Philosophy and the Mirror of Nature*, pp. 140-1.

⁴² It is possible to refer to Rorty as one of the most radical supporters of the last objection, and therefore as a sort of occasional ally. I say occasional ally because Rorty's stance against the value and the relevance of epistemology *tout court* is well known. A development of Rorty's critical position on

[...] the confusion I attributed to Locke [...] [is that] between a mechanistic account of the operations of our mind and the grounding of our claims to knowledge. This is what T. H. Green was to call "the fundamental confusion, on which all empirical psychology rests, between two essentially distinct questions, one metaphysical, What is the simplest element of knowledge? the other physiological, What are the conditions in the individual human organism in virtue of which it becomes a vehicle of knowledge?"⁴³ Green's distinction between an "element of knowledge" and "the conditions of the organism" reminds us that a claim to knowledge is a claim to have justified belief, and that it is rarely the case that we appeal to the proper functioning of our organism as a *justification*. Granted that we sometimes justify a belief by saying, for example, "I have good eyes", why should we think that chronological or compositional "relations between ideas" conceived of as *events in inner space*, could tell us about the logical relations between propositions? After all, as Sellars says: "In characterizing an episode or a state as that of *knowing* we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons of justifying and being able to justify what one says"⁴⁴ How was it that Locke should have committed what Sellars calls "a mistake of a piece with the so called *naturalistic fallacy* in ethics"?⁴⁵

To the sceptical question "how do you know that p and q are good instances of objective knowledge?" the Cognitivist answers: "because they have been produced in such and such a way". The

epistemology is M. Williams, *Groundless Belief—An Essay on the Possibility of Epistemology* (Oxford: Blackwell, 1977). For criticisms of Rorty's anti-epistemological position cf. A. I. Goldman, "Review of Rorty's *Philosophy and the Mirror of Nature*, *Philosophical Review* 90 (1981), pp. 424-429 and E. Sosa, "Nature Unmirrored, Epistemology Naturalized", *Synthese* 55 (1983), pp. 49-72.

⁴³ T. H. Green, *Hume and Locke* (New York, 1968), p.19 (Rorty's note).

⁴⁴ Sellars, *Science, Perception and Reality*, p.169 (Rorty's note).

⁴⁵ I am not sure whether Locke was really disregarding what seems to be such an evident naturalistic fallacy or if, on the contrary, he was also presenting, together with his psychology, a kind of philosophy of the genesis of the process of knowing. If the latter is the case, then Rorty's objection may either be confusing the distinction between *ratio essendi* and *ratio sine qua non* or may not really apply to Locke's philosophy of knowledge.

application of the *Prinzip*—what justifies the scientific theory that states that to be cognitively produced in such and such a way amounts to being a genuine instance of knowledge?—shows that such an answer is insufficient. The Cognitivist is forced to argue in favour of his reasons for believing that a certain description of a mental or physical process provides a valid epistemic argument for a justification of a given extension of knowledges.⁴⁶ Thus, either he is bound to be caught immediately in the cycle of the *diallelus* (description as a criterion) or he commits a naturalistic fallacy (description as justification-affording) which then leads to the *diallelus*, since the description which is supposed to be justification-affording also belongs to the extension of knowledge.

Husserl came to formulate his *Prinzip* by reacting against his previous psychologism. This accounts for the fact that the principle can easily be extended to the following conclusion: in so far as any cognitive science is a science of knowledge, i.e. it has or aspires to have the status of empirical knowledge concerning the nature of knowledge, and hence it professes to belong to $\{\Sigma_1, \Sigma_3\}$ at $\mathcal{L}1$, it also becomes unable to provide a non-circular solution to the metaepistemological problem. A cognitive science—and hence any Quinean naturalised epistemology, as I shall argue in the last chapter—cannot have it both ways. Either it differentiates itself from a philosophical theory of knowledge by being empirically testable, predictive etc., but then, in so far as it claims to be also a theory of knowledge, it plainly begs the metaepistemological question of the justification of its own first premises; or it claims to be able to solve, among other problems, the metaepistemological circle as well, but then it must provide an indirect solution which cannot be in itself an instance of empirical knowledge, and with respect to which the cognitive sci-

⁴⁶ As I shall argue in chapter seven, this sort of objection can also be levelled against certain analyses of knowledges which employ the process through which some instance of objective knowledge has been reached as a criterion.

ence must abandon any aspiration to gain the status of empirical science.

What can the Cognitivist reply against the *Prinzip*? He might assume a very radical position and object that it is the definition of a genuine instance of knowledge which is to be tailored to the concept of human behaviour. He could define a valid extension of knowledge as merely the result of what happens inside the largest number of human brains, for example. In so doing, he could interpret the epistemological normative value of our system in sociological or anthropological terms. For instance, *p* would be a genuine instance of knowledge if and only if it was so considered by the largest or the "most representative" number of human beings; or perhaps, *p* would be a genuine instance of knowledge if and only if it was an instance of what the largest or the "most representative" number of human beings would produce through their cognitive processes.

No matter whether or not we are entirely persuaded by the application of Husserl's *erkenntnistheoretische Prinzip*, the Cognitivist's extreme counter-argument can be rejected on two further grounds, none of which is particularly original. Although I have carefully avoided specifying what knowledge is in detail, I have assumed that a minimal requirement is to consider it as the product of a satisfactory epistemic relation between mind and reality. This does not say a lot, for we know that the problem consists precisely in defining what "satisfactory" and "epistemic" mean. And yet, it is enough to allow one to argue that the proposal of the Cognitivist is counter-intuitive insofar as it eliminates the knowing activity's reference to anything external. Knowledge, whatever it is, is no longer the outcome of a satisfactory epistemic relation between subject and object, but represents merely the result of whatever happens in the largest number of human brains, though it remains perfectly conceivable that just a few subjects may enjoy a correct epistemic relation with reality, the kind of relation—whatever it may be—required in order to have knowledge. Few people would consider morally commendable whatever the majority of individuals would choose to do in a particular situation. Why should we be any more optimistic and permissive in the

case of their epistemic behaviour? The reply of the Cognitivist leads to forms of sociological relativism, which are in fact just another way of accepting the prospect that human knowledge may be thoroughly unjustified. Now, let us look at the second reason for rejecting the Cognitivist's counter-argument. Any attempt to save both the nature of knowledges—as the historical result of an on-going, satisfactory epistemic relation involving both man and reality—and the possibility of formulating a theory of knowledge not invalidated by a *petitio principii*, is uncontroversially positive. Yet, the extreme Cognitivist appears to be inclined to give up the nature of knowledge on condition that a theory of knowledge may become possible.⁴⁷ No matter what we think about the other counter-arguments, I trust we should not accept such an alternative if there were any chance to rescue both theory and contents.

Obvious as it may be, it is important to recognise that the objections of the *diallelus* and the naturalistic fallacy do not belittle the value of a scientific theory of the cognitive processes. What the *Prinzip* highlights is that an investigation into the nature of the psycho-physical conditions that make knowledge a possible event is simply insufficient to enable a theory to escape the metaepistemological problem, and becomes an altogether inappropriate approach when utterly radical questions are being asked about the nature of knowledge. Rightly understood, Husserl's and Rorty's objections do not deny that a cognitive approach to the nature of knowledge is viable and productive, nor that, through an answer to what in chapter two I suggested calling the genetic question G₂, we

⁴⁷ Both the idealist-coherentist and the psychologist philosopher can abandon the relevance of external reference for the understanding of the nature of knowledge, and both could do so in order to save the value of a theory of knowledge, the former by attempting to avoid the epistemological *petitio principii* assuming a conception of the set of knowledges as a total, absolute holistic product of the process of knowing; the latter by attempting to avoid the naturalistic fallacy, eliminating the relational nature of knowledges.

can come to understand better what makes it possible, on the human side, to enter into the *diallelus*. What the objections purport to prove is that no answer to the psycho-physical genesis of the encyclopaedia can really provide a satisfactory justification of a theory of the whole system of knowledges. The circle of extension and criteria cannot be broken by a scientific description of certain psycho-physical properties displayed by human cognitive processes or any other sociological considerations at the macro level. Of course, as in the case of the dynamic solution, the cognitive option remains available to any epistemologist who is ready to privilege a scientific investigation into the nature of instances of knowledge at $\mathcal{L}1$ and sacrifice the possibility of a philosophical theory of knowledge at $\mathcal{L}3$. In this eventuality, the outlook of a Cognitivist proves to be not very different from the rather sceptical position already endorsed by the Dynamist. As far as the possibility of an *Erkenntnistheorie* is concerned, Carneades or Gassendi, epistemologically the most optimistic of the sceptics, are in the same position as the more pessimistic of the cognitive epistemologists. This also holds true for other attempts at direct solutions, such as the search for the given—viz. the search for instances of knowledge which, being the most simple and basic expressions of knowledge, could provide a justificatory ground for the rest of the encyclopaedia, without requiring any justification for themselves—or the adoption of the dichotomy immediate vs. mediate forms of propositional justification, a distinction that purports to show that p could justify q without being in need of any justification by a previous m (I shall revert to this point in chapter six). As regards this issue, it is worth adding here that, although a theory of the self-justification of p works at the same primary level as the Cartesian *cogito*, we shall observe in the next chapter that the latter is a somewhat different case because, contrary to the (allegedly) immediately justified statements, it may be considered empty of any empirical content, and in this sense counts as an indirect solution of objection⁴⁴. At the moment, suffice it to say that, if we were focusing on the logical structure of the answer and not just that of the ques-

tion, an approach based on the previous dichotomy could be interpreted as indirect in so far as it rejects the alternative whereby any *p* is either justified or unjustified. I shall be more explicit on this point in the next chapter.

At this point, the restriction posed by the *erkenntnistheoretische Prinzip* can be succinctly recapitulated thus: the objection of epistemological *petitio principii* is not an effective problem at the level of a knower's epistemic activity; however, once a theory of knowledge, that appreciates the sceptical problems arising at $\mathcal{L}2$, also admits the difficulty of the justification of its own position at $\mathcal{L}4$, it cannot revert to $\mathcal{L}1$ in order to solve the problem which arose at $\mathcal{L}4$ and at the same time hope to be able to escape the vicious circularity of its manoeuvre. Its adoption of a $\mathcal{L}1$ -solution would amount to an attempt to provide a *direct* treatment of the problem and is bound to be caught either in the naturalistic fallacy or in some restatement of the *petitio principii*. What justifies the assumption of a certain description, e.g. of our mental processes, as the reliable processes which lead to the production of knowledge? Why should some basic scientific propositions count as the proper ground for our theory? Their certainty is not equivalent to their truth and the fact that they are reached, for example, by means of an intuition can only give rise to another vicious circle.

Descriptivism, givenism and cognitivism represent three very popular types of direct solutions to objection⁴. In visual terms, we may consider them right-wing, for they place themselves on the right-hand side of the sceptical question, after the *Index der Fraglichkeit*. Although they may claim to disregard it, such solutions follow directly from the sceptical challenge. Their aim is to compel the sceptic to concede that they have been able to answer his problem within the limits set by the sceptical question itself. In chapter six, I shall reconsider the *naturalistic fallacy* in order to clarify how forms of cognitivism incur this problem. At the moment, we may agree to say that, whether they explicitly attempt to refute the sceptical challenge or not, their necessary failure is established in principle

by the very morphology of the problem.

Having discovered that the logic of the problem undermines any possibility of a direct solution, the only other course left is to adopt some indirect approach. What are the oblique strategies that may be embraced in order to attempt to resolve the *diallelus*? Are they really any more successful than the direct ones? This is what we are going to see in the next chapter.

CHAPTER FIVE

THE SOLUTIONS OF THE PROBLEM

A PHENOMENOLOGY

*This is no time for arguments, my Title
Needs not your School defences, but my sword,
With which the Gordian of your Sophistry
Being cut, shall shew th'Imposture*
J. Fletcher and P. Massinger, *The Bloody Brother*.

1. Apagogic Strategies

Prevention, whenever possible, is the only useful strategy against a disease that, once it has taken hold, is incurable. This is a rather unsophisticated truth, whose sole appeal here is that it applies to therapeutic as well as to social and epistemological problems. If there is a difficulty that starts looking irresolvable after a while, a rational alternative may be to stop behaving like a fly trapped behind a windowpane and attempt to ascertain the conditions that make the problem possible—and hence dispose of at least one of them, if no more. The *diallelus* is exactly such a blind alley. Owing to the basic omnipresence of the notion of justification at all levels of knowledge, there is evidently no way of resolving the problem by means of a direct strategy. The sceptic will always have the last word, unless we modify some essential element in the framework. As a result, the metaepistemological problem compels us to invert our approach. Given the morphology of the problem, no direct solution *descending* from it (top-down) can ever be successful. It follows that the only alternative is to *ascend* through the conditions that make the problem

possible (bottom-up), in an attempt to abandon at least one of the various tenets which can be identified as the sources of our difficulty. An indirect strategy becomes indispensable. Borrowing a technical term from Aristotle, I shall henceforth call any such strategy *apagogic*.¹

Though rarely in the terms employed here so far, the need for an apagogic solution of the metaepistemological problem has long been recognised by various philosophers. The task of the present chapter is to provide a phenomenology of such apagogic solutions, and hence highlight their possible limits, still in relation to the morphology of the problem. After such a reconstruction we shall enjoy a clearer view of the conditions that must be satisfied by any new approach that puts itself forward as a successful strategy for overcoming the metaepistemological difficulty. Then we will introduce the proposal to be developed in the following chapter.

2. *The Logical Roots of the Apagogic Solutions*

At the end of last chapter we came to the conclusion that an apagogic solution of objection⁴⁴ cannot be right-wing, i.e. it never violates Husserl's *Prinzip*. This has left us with only one alternative. Since an apagogic solution can comply with Husserl's *Prinzip* only if it is

¹ Originally, ἀπαγωγή in ancient Greek meant "leading away" and covered quite a broad semantic area. In logic, it became a name for any inferential process that argued for a conclusion without following a strictly deductive path. It could be a reasoning based on probable evidence, an abduction, or more often a *reductio ad absurdum*, that is an apagogic proof of an assumption by means of the demonstration of the absurdity or impossibility to which its negation is bound to lead. Apagogic solutions have been developed by L. Nelson in *Progress and Regress in Philosophy, From Hume and Kant to Hegel and Fries*, ed. by J. Kraft, tr. by H. Palmer (Oxford: Blackwell, 1971), Vol. II, *passim*; by N. Rescher in *Methodological Pragmatism* (New York: New York U. P., 1977), especially the second chapter which presents a type of pragmatic solution; and by R. Amico, *The Problem of the Criterion* (Lanham: Rowman & Littlefield, 1993).

empirically empty—in the sense that it can neither be provided by an empirical-scientific finding nor count as an instance of empirical knowledge in itself—it follows that an apagogic strategy can only work on the logical structure of the problem.

The formal aspects of the problem are three:

- a) the *self-referential nature* of the problem,
- b) its *presuppositions*, i.e. the conceptual framework within which the issue arises, and
- c) its *justificatory logic*.

Therefore any apagogic strategy will inevitably address one of the three following questions: can the problem be solved

- a) by exploiting the self-reflective nature of the process of justification itself, that is by reflecting upon the nature of the entire sceptical process?
- b) by working on the conditions that make the formulation of objection^{LA} possible? Or finally,
- c) by manipulating its justificatory character?

The order in which the previous questions are listed is not conceptual but historical. Conceptually, the nature of the problem would come under analysis first, then its context and finally the process that includes both the problem and reflection upon it. Historically, this is not the case because philosophers have tried to keep the core of the problem, i.e. its justificatory nature, unchanged for as long as possible. They have tackled the periphery of the issue first, as it were, in an attempt to be as conservative as possible in the transformations imposed upon the various features that make the problem possible. Only a dissatisfaction with the earlier solutions, caused by the history of the problem, has inspired the following increasingly radical approaches.

Six principal apagogic strategies have been dominant. Focusing on the first feature of the problem, the *dogmatic* strategy argues that the radical sceptic refutes himself, while the *Cartesian* exploits the sceptical process of doubting itself and discovers in it the origin of a self-reflective awareness that hence provides a criterion of ultimate

certainty. Concentrating on the second feature, the *transcendental* strategy tackles the conditions that make the entire problem possible. Finally, emphasising the third feature, the *foundationalist*, the *coherentist* and the *falsificationist* strategies work on the nature of the notion of justification. Because of their positions with respect to the sceptical question, the first and the last group of strategies can be characterised as “central”, for they operate on the problem itself, while the transcendental strategy is more “left-wing”, since it works on the “situation” that precedes and leads to the formulation of the problem. Of course, these six approaches do not provide an exhaustive map of all the apagogic strategies that may be adopted against objection⁴. Rather, they constitute the main headings under which families of philosophers can be grouped, as sharing a similar orientation. To give a specific example, two recent attempts² to refute the sceptic have more or less explicitly adopted a transcendental approach—in terms of the pragmatic and linguistic conditions that make the epistemic process possible—thus placing themselves on the Kantian side of the various apagogic solutions to the sceptical challenge. But let us inspect each of these strategies more closely.

3. *On the Self-referential Nature of the Problem*

3.1. *Dogmatism*

The oldest attempt to cope with the sceptical challenge by means of an apagogic strategy is described by Sextus Empiricus himself in several passages. It consists in the apparently obvious objection of

² N. Rescher, *Scepticism* (Oxford: Blackwell, 1980) and A. C. Grayling *The Refutation of Scepticism* (London: Duckworth, 1985). It is worth remarking that both authors reconstruct the sceptical theses following Wittgenstein, Moore and Hume rather than Sextus Empiricus. This enables them to adopt both a linguistic-transcendental translation of Wittgenstein's refutation of scepticism (introduced in *On Certainty*) and a “naturalisation” of Hume's abandonment of scepticism.

self-refutation. As Sextus remarks:

The Dogmatic philosophers *imagine* that the argument which maintains the non-existence of proof is overthrown by itself, and that it affirms proof by the very means by which it abolishes it [my emphasis].³

One could say that the dogmatist's objection of inconsistency, and the sceptic's reply, represent the *pons asinorum* of epistemology. The logical path followed by the former is fairly intuitive. Since the sceptic demands a justification in every case, then such a prerequisite must also be satisfied by the sceptical claim itself, but this is impossible. The sceptic's failure to fulfil his own requirement reveals both that the sceptic is inconsistent—for he maintains that a metastatement such as "nothing is certain" or "nothing is knowable" is indeed certain or knowable—and that he has no ground for his alleged challenge, since surely the conviction that nothing is justified can only be justified by the very fact that at least this statement is justified.

We have already encountered the sceptic's adequate response in the last chapter, when I introduced the procedure of *συμπεριγράφειν* in relation to some of the limits of the falsificationist proposal. The objection of self-refutation can succeed only insofar as

- a) the sceptical criticism is considered a *doctrine* instead of a *procedure*; and
- b) the sceptical goal—which is progressively to erode the foundations of the building of knowledge from within—is misunderstood as a frontal attack, which either succeeds or fails to dismantle the entire system of our knowledges *from without and all at once*.

In fact, no matter how strongly holistic they are thought to be, both the encyclopaedia and its theory can always be demolished gradually by a sceptical *regressus*, eventually generating a *reduction ad absurdum* of the whole system of knowledges. Like an acid corroding a

³ See Sextus Empiricus *Against the Logicians*, II. 463.

metal, the sceptical *regressus* attacks a theory of knowledge in some particular place but ends up by annihilating it completely, unless the process can be interrupted. Thus, Sextus Empiricus kept on repeating that the sceptical challenge is not a negative theory, which confronts the positive theory of knowledge from outside, but is like an internal process of self-destruction, a purge—as he puts it—which removes everything from within, including itself. To put it more technically, sceptical questions are *immanent*, not *transcendent* with respect to the encyclopaedia. As a radical, internal criticism, they are no less lethal than an external challenge. Modifying Neurath's metaphor, the role of the sceptic can be compared with that of a kamikaze fighter whose aim is to sabotage the craft, not caring whether he is going to drown with all the other members of the crew. The dogmatic philosophers, who adopt the self-contradictory approach, have generally been unwilling to recognise that objecting that the saboteur is also going to die, is a completely inadequate reply to his threat. The sceptic is an extremist. He believes that *pereat mundus fiat* (epistemological) *iustitia*. Thus he is not going to give up his doubts because someone considers them idle or self-contradictory. In case, the fact that even his own doubts cannot be taken too seriously is the final proof (but can there be something like a final proof in his vocabulary?) that absolutely nothing at all deserves the title of knowledge. We shall see in the following chapters that, if the sceptical challenge is constructed in this powerful version, as an immanent and self-destroying criticism internal to the theory, both the coherentist approach and Quine's proposal for a naturalised epistemology lose most of their force. The sceptic is far more ingenious than most dogmatic philosophers have been ready or willing to acknowledge. Or to put it less anthropomorphically, if we wish to refrain from reflecting in the most critical way upon the justification of the system of our knowledges, of the encyclopaedia as a whole, we have better ways of doing so than lapsing into a fallacy of *ignoratio elenchi*.

3.2. *Cartesianism*

By highlighting the internal nature of the sceptical criticism, a close association has in fact been established between the development of doubts about knowledge on the one hand, and the search for an epistemology on the other hand. If there is no dichotomy between the sceptical and the investigative attitude, if the pursuit of an ultimate justification cannot be divorced from a reflection upon the logical possibilities represented by the sceptical counterfactuals, then the self-reflective strategy should not be applied merely to the relation entertained by the sceptical controversy with itself, but should rather be extended to the entire search for a final foundation, i.e. to the whole, inextricable dialectic of doubts and certainties. This is the Cartesian solution embodied in the *cogito*. Descartes' is an indirect approach because it is self-reflective, and it is self-reflective in so far as it is based on the logical identity between the process of doubting and the certainty emerging from the occurrence of the process itself. Under the methodical pressure exercised by what is logically possible—indeed, under the pressure exercised by what the mind can conceive to be possible for an omnipotent being (the demon argument)—the subject retreats from a straight defence of the ordered structure of his own possible knowledge of the external world and turns instead to the search for an indirect justification. The latter is made possible by the reflective certainty of the subject's mental process, occurring in the internal world of consciousness in the very course of the exploration of the possibility of an absolute foundation. The logical possibility of an omnipotent and malicious demon is countered by the logical identity between the process of doubting and that of thinking. The only way in which the demon could make us err would then be to prevent us from beginning to wonder whether we are ever mistaken. This is the most efficient type of disinformation, as any dictatorial regime knows only too well. But the demon has accepted the game of questions and answers and therefore he can only lose. The search for an ultimate foundation and the sceptical

challenge itself necessarily constitute a mental process extended through time, and this is a sufficient condition for achieving a point of self-reflective certainty.

Descartes' solution aims at the discovery of a single certainty reached by self-investigation. It works at the primary level of instances of knowledge, but it is also empirically empty and apagogic since, like the dogmatist's objection, it is based on the logical reflexivity of the process, not on any particular extension of knowledge. Finally, it requires a somewhat extended process of doubting, in order to achieve its corresponding recognition as an activity by the knowing mind, and implies a crystalline transparency of the mental processes for the subject who is aware of them, an ideally noiseless channel of communication between us and ourselves, without which no idea of the mind could ever be completely clear and distinct to the mind itself. For all these different reasons, Descartes' strategy has often been described as *internal foundationalism*.

Descartes' *internal foundationalism* shows its limits as a solution to objection⁴⁴ when it attempts to bridge the discrepancy, inevitably left open by the *cogito*, between the experience of internal certainty and the possibility that any such certainty may count as knowledge of the external world, i.e. as a truth. Establishing and guaranteeing a symmetric relation between clear and distinct ideas, on the one hand, and their actual objects on the other requires a triangulation with a veridical *centre of ontic power* which, in so far as it is ontologically responsible for the existence of both poles of the epistemic relation, the mental and the physical reality, can also assure the complete reliability, in terms of their truthfulness about the external world, of mental representations which are clear and distinct and therefore indubitable. The mind is fully accountable for the assent that it decides to give to or withhold from any particular belief. However, ensuring that the same belief appearing thoroughly certain to, and hence indubitable by, the mind is also true of a given reality can only be a matter for God, the creator of both substances. Since in Descartes' internal foundationalism God, as the veridical centre of ontic power,

is altogether distinct both from the reflective subject, i.e. the *centre of epistemic power*, and the extended world of mindless entities, the passage from certainty to truth must, as we have seen, give rise to a circular reasoning. The existence of a veridical centre of ontic power, required by the system, is demonstrated on the basis of a logico-epistemic process based on the certainty reached in the self-referential process, i.e. within the centre of epistemic power, the very process whose truthfulness was in question and required a veridical centre of ontic power in order to be trusted. The bridge between certainty and truth can only be presupposed. The Cartesian circle is then at the same time a test of internal consistency—if God exists, he would provide us with minds capable of proving his existence, and the existence of God would ensure us that in most circumstances, and especially when we attend only to clear and distinct ideas, our minds are capable of grasping the real nature of their objects of knowledge and hence prove the existence of God—but also a flaw in the Cartesian system, as it reveals that the *cogito* is insufficient to solve the metaepistemological problem. In so far as the *cogito* can be considered an empirically and informatively unextended point—i.e. a purely logical, non-empirical and non-informative self-reflection whereby the subject reaches full certainty about his personal, epistemic activity of doubting—it is also the point on which the Archimedean lever may safely hinge in order to reconstruct the body of knowledge and therefore it can also work as the principle for a correctly indirect solution of the problem. But it is precisely its epistemically unextended nature, which saves it from the sceptical attack, which renders the *cogito* incapable of filling the empty set of knowledges when a first, indubitable instance of knowledge is required. Drawing an analogy with geometry, knowledge turns out to be anchored to the *cogito* in the same way as a line can be said to be made of unextended points: we can hardly reconstruct our knowledge from the *cogito*, for how do we escape from the lack of extension of the logical point? The *cogito* is the limit which may enable the mind to establish that manifold instances of knowledge have the fundamental

property of being indubitable by the mind itself, but it is unable to expunge their ontological *Index der Fraglichkeit* without calling into play a veridical God, whose existence can be proved only via a vicious circle. Along this line, the objection moved by Leszek Kolakowski⁴ to Husserl's revival of the Cartesian solution can be reiterated here. There is no way to ascend from the *cogito* to the justification of knowledge unless we either beg the question—and this seems to be Descartes' moderate solution⁵—or identify the two centres of power, thus assuming that the self-reflective activity of the subject is somehow identical to the ontic constitution of what is known. Such a radical outcome, which according to Kolakowski renders the later Husserl a defender of a version of idealism, would not be understandable without a previous shift to the left of the metaepistemological problem, a step into the Kantian approach and the constructive value that the conception of mind's systematic reflection acquires in German idealism.

4. On the Conditions of Possibility of the Problem: Transcendentalism

The transcendental solution concentrates on the reasons underlying the investigation into the nature of knowledge and in particular the status of a theory of knowledge. In this sense, it works at the highest possible level of reflection—henceforth the transcendental level—where even the possibility of an epistemological inquiry is itself

⁴ L. Kolakowski, *Husserl and the Search for Certitude* (New Haven and London: Yale U. P., 1975), p. 78 and ff.

⁵ In fact Descartes has one more weapon in his hands, the ontological argument, which should provide that bridge between certain thought and the most real of all realities; see Henri Gouhier, "La Vérité Divine dans la Méditation V" in *Les Etudes Philosophiques* 2 (1956), pp. 296-310. After Kant, the "solution" is not easily acceptable. However, Hegel's appreciation of the same argument is indicative of the "internalist and subjective" orientation of his and Descartes' philosophy.

subject to critical analysis. This has a conspicuous advantage over the Cartesian *cogito*. The problem of enlarging the initially very narrow horizon constituted by the minimal certainty embodied in the *cogito* does not arise, since the strategy has already assumed the broadest possible perspective. At the transcendental level, even the underlying rationale of the epistemological project and the sceptical criticism is taken into consideration, and not just the actual dialectic of questions and answers. The whole discussion of objections based on purely logical possibilities is subject to reflection and finally re-conducted within the logic of argumentation. After all, the sceptical challenge itself must resort to some logical tools in order to dislodge even the most fundamental of all knowledges. It is precisely the linguistic, argumentative and semantic horizon within which the sceptical questioning unfolds that may represent a kind of rock bottom, from which a reconstruction of the edifice of knowledge may be attempted. Needless to say, the transcendental approach was one of the major findings of Kant's criticism. Unfortunately, as we have seen in chapter three, Kant himself directed the transcendental analysis only towards the status of manifold instances of knowledge—the whole epistemic activity of the ego is recognised to be constitutive of the known reality—but not towards the possibility of such an investigation, of a *Critique of Pure Reason*. Since Kant did not bring his transcendental analysis to final realisation, Hegel was able to remonstrate that he had underestimated the importance of the sceptical inquiry and had been caught in another unjustified version of Lockean descriptivism.⁶ It seems that the radicalisation of the tran-

⁶ Cf. G. W. F. Hegel, "On the Relationship of Scepticism with Philosophy" Eng. tr. in G. Di Giovanni and H. S. Harris (eds.) *Between Kant and Hegel*, pp. 311-62, and "Glauben und Wissen, oder die Reflexionsphilosophie der Subjektivität in der Vollständigkeit ihrer Formen, als Kantische, Jacobische und Fichtesche Philosophie" in *Jenaer Kritische Schriften*, hrsg. von H. Buchner und O. Poggeler, *Gesammelte Werke*, hrsg. im Auftrag der Deutschen Forschungsgemeinschaft (Hamburg: Felix Meiner Verlag, 1968), Bd. IV, pp.315-414, see esp. p. 326.

scendental reflection was left for the later Wittgenstein to carry out.

Wittgenstein does take the sceptical attack seriously. In *On Certainty*, he places the sceptical challenge within the limits of the epistemic grammar that makes the general linguistic game of believing and doubting conceivable. There we read that

[...] the *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn [§ 341]. Doubting and non-doubting behaviour. There is the first only if there is the second [§ 354]. One doubts on specific grounds. The question is this: how is doubt introduced in the language-game? [§ 458].

Systematic doubts of a Cartesian nature lead reflection to recognise the perimeter of the rational discourse. If at a certain point we desist from our quest for justifications this is not because we merely resolve, arbitrarily, to endorse some premises we experience as indubitable—as one horn of the trilemma would have it—but because we cannot proceed any further than the logical and semantic limits *showed* (in the sense of the *Tractatus*) but also accepted by the sceptical questioning itself.

Any transcendental approach, be it idealistic, conceptual or linguistic, shows a tendency to acquire an *objective*, *anti-realistic* and *dualistic* nature. It is objective in that its inter-subjectivism is not meant to bear any resemblance to forms of relativistic personalism or solipsism, but is rather based on the mind's uniform and constant activity of knowing. Given the essentially invariable behaviour of the mind, universal epistemic standards follow inevitably: they are not a matter of arbitrary choices, but common to all members of the semiotic or conceptual community. The fixed immutability of the reference—endorsed by any form of naive realism—is replaced by the invariable nature of the mind's activity. The approach is anti-realistic in the sense that, by concentrating on how knowledge comes to be formulated, it entrusts to the mind a constitutive role with respect to the epistemic output. It is dualistic because it relies on the stability of the mental process, no longer on an appeal to an independent, exter-

nal reference, to grant the objectivity of the epistemic output. The more objective the output, the more the mind needs to be made responsible for its own constructions, and the more dualistic a transcendental position must be. In the end, the notion of external reality can even run the risk of being annihilated, either because any *Ding an sich* remains *in principle* excluded from the encyclopaedia of knowledges (transcendental idealism)—both as what the mind cannot be considered epistemologically, linguistically or conceptually responsible for, and as what does not exist for the life of consciousness—or because the constitutive activity of the mind overflows into the ontological realm, thus erasing any radical difference between itself and being (I shall turn to the latter form of absolute idealism in a few moments).

Since the mind is made fully responsible not only for its own constructions but also for the stable features the latter must show in order to have a thoroughly objective nature, any form of transcendentalism must be interpreted as the ultimate consequence of the modern subjectivist turn, that is as a coherent development of the Cartesian and Enlightenment conviction that the subject is entirely accountable for his knowledge. Full epistemic responsibility is paid for in terms of ontological dualism. The *coincidentia* between the laws of thought, or the grammar of linguistic games, and the essential nature of the external reference can never be granted from within the transcendental perspective itself, whereas the subjectivist-constructive approach leads in the exactly opposite direction of a detachment of the mind from being. Objectivity of knowledge is preserved at the expense of its representative character, its descriptive correspondence with its reference remaining now a nostalgic memory of the uncritical past. Some form of dualism becomes a constant difficulty necessarily affecting any transcendental approach. Unfortunately, in most cases transcendentalism does not merely halt at this acknowledgement, but is paralysed by it. No further effort is made to mitigate the gravity of such a loss of direct realism. The pull towards an unrecoverable unity of mind and being and a pre-critical conception

of knowledge as immediate representation of the object—which is as commonly presupposed as it is largely unjustified—remains unsolved. As a consequence, the subjective perspective underlying the transcendental approach represents its strength, but also at the same time its weakness, depending on the context. A transcendental strategy deals with the sceptical possibility by pointing out that, with the metaepistemological problem, reflection has reached its *non plus ultra* limit. Reflection appears unable to go beyond certain basic premises, which are also shared by the same sceptical dialectic, without simply restating the point called into question. But drawing a final line from within means excluding at the same time the possibility of considering anything in the outer world. The world in itself remains an inscrutable and impenetrable land. When fully consequential, forms of neotranscendentalism such as Putnam's internal realism or Apel's pragmatic of communication must all share this essential problem.

5. On the Justificatory Nature of the Problem

When they are not internal and therefore Cartesian, forms of foundationalism very often rank as direct strategies, attempting, as they do, to develop a solution of the *diallelus* by establishing either an indubitable extension of knowledge or some limited collection of certain criteria whereby such an extension may be determined. There have been foundationalist strategies, however, which have been both indirect and non-Cartesian. They have built on a somewhat questionable interpretation of the metaepistemological problem, working on the justificatory logic that underlies it. Coherentist and falsificationist strategies, on the other hand, may more easily be interpreted as apagogic for they are usually developed as a consequence of the problems faced by forms of direct foundationalism. In this case too, it is a particular interpretation of the logic of justification that plays an essential role. A digression into the latter will therefore be inevitable in order to approach these strategies correctly.

5.1. *On the Logic of Justification*

During the last three decades, at least two factors have had the important effect of encouraging us to deepen our understanding of the nature, scope and uses of the notion of justification: Karl Popper's forceful objections, made within the methodological context, against the *relevance* of the role of justification to scientific research,⁷ and the rather intractable difficulties concerning the *insufficient* role played by justification in the definition of knowledge, brought to light by Hedmund Gettier within the more traditional context of epistemology.⁸ The literature on the logic of justification has since grown immeasurably⁹ and the following few pages cannot attempt to provide a comprehensive overview of even the main findings. With the aim of reaching a proper understanding of foundationalism, coherentism and falsificationism as possible apagogic solutions of the metaepistemological problem, we shall instead consider only three areas, in decreasing order of generality:

- the characterisation of theories of justification as definitional or criterial;
- the nature of theories that treat justification as a property; and finally
- the nature of theories that treat justification as a relation.

5.1.1. *Definition vs. Criteria of Justification*

The distinction between *definitional* and *criterial* approaches to the

⁷ See K. R. Popper, *The Logic of Scientific Discovery* (London: Hutchinson, 1959, 1962, first published in 1934).

⁸ E. L. Gettier "Is Justified True Belief Knowledge?", *Analysis*, 23 (1963), pp.121-3.

⁹ For an overview see A. Plantinga, *Warrant: the Current Debate* (Oxford: Oxford U. P. 1993). Plantinga has presented his own position in *Warrant and Proper Function* (Oxford: Oxford U. P., 1993).

theory of justification¹⁰ has its roots in the philosophy of logic, where it was first introduced in order to reduce the contrast between two apparently irreconcilable approaches to the theory of truth.¹¹ *Mutatis mutandis*, the idea can be summed up thus:

- a *definitional* approach may specify the *meaning* of “being justified” for a designated *justification-bearer* (JB), analysing the *property* of being justified (P_J); while
- a *criterial* approach may provide a *criterion* C whereby it is possible to state whether a *designated potential* JB (PJB) has in fact the property of being justified or not, i.e. whether or not $P_J(PJB)$.

Following this distinction, further analogies between the theory of truth and the theory of justification can be envisaged. For example, it may become possible to think that the relationship between the two main trends of *foundationalism* and *coherentism* in epistemology resembles that between a *correspondence* and a *coherentist* theory of truth, foundationalism offering a definition of P_J while coherentism provides a criterion for P_J and both supplement each other. Likewise, the distinction between *authorising* and *guaranteeing* criteria¹² could be read as a more precise formulation of a similar distinction between the two main senses in which the technical term *criterion* has been used in epistemology, namely as a *battery of justificatory tests*, e.g. p is justified because it is accepted by the majority of members of the scientific community, and as a *class of justificatory properties* or *marks*, e.g. p is justified because it is clear and distinct. In a slightly modified version, this would amount to saying that if C^a is an authorising criterion for P_J then it is at most only contingently true that ($C^a \leftrightarrow P_J(JB)$); while if C^g is a guaranteeing criterion for P_J then

¹⁰ As far as I know the best presentation of the issue is provided by D.-H. Ruben, “A Note on Justification: its Definition and its Criteria”, *Philosophy and Phenomenological Research*, 37 (1977), pp. 552-5, but the distinction is often assumed in the literature as a matter of course.

¹¹ Cf. S. Haack, *Philosophy of Logics* (Cambridge: Cambridge U. P., 1978), pp. 88-91.

¹² N. Rescher, *The Coherence Theory of Truth*, (Oxford: O. U. P. 1973).

necessarily ($C^g \leftrightarrow P_J(JB)$).

However, since considerable doubts have been cast on the adequacy of the distinction “definitional vs. criterial” even within the initial context of a theory of truth, the use of this distinction should not be extended without reservation. And indeed, unqualified use of the dichotomy in order to classify any theory of justification faces two main problems.

1) In order to be applicable without further proviso, the distinction is forced to rely on the over-simplified equation “theory of truth: definitional/criterial *theories of being true* = theory of justification: definitional/ criterial *theories of P_J* ”. The first half of the equation presupposes that—if we exclude metaphysical doubts—the investigation of the nature of truth (or the *noun* “truth”) can be *adequately* and *completely* reduced to the investigation of the *property* of being true (or the *adjective* “true”), as this is displayed by truth-bearers. This is because an actual truth/falsehood is equivalent to a potential truth-bearer being in fact true/false and, when an alethic property is resolved into its relational elements, the latter are logically more *fundamental* than and constitutive of the *analysandum*, while also remaining conceptually *heterogeneous* with respect to it, that is they explain, but are not in themselves equivalent to alethic concepts. A correspondence theory of truth, for example, may hope to explain alethic properties *exhaustively* in terms of presence/absence of a relation of correspondence between facts and propositions, but such a relation is evidently *heteroconceptual* with respect to the notion of truth itself. It may be supposed to be *truth-constitutive* and *truth-conductive*, but the relation of correspondence in itself is not true nor is it an instance of truth, in short it bears no direct *semantic relation* to the concept of truth. It is in this simple sense that truth values are *conceptually primary* or *non-derivative* with respect to the constitutive relation of correspondence, although logically speaking not *equally* or *more elementary/fundamental*. Their relational analysis requires a conceptual shift, employing in fact non-alethic concepts,

and could not rely on a more basic, homoconceptual truth-relation without incurring mere linguistic redundancy. As a consequence, both the fact that

- the occurrence of the relation may be a *necessary* and *sufficient* condition for the appearance of a truth, and the fact that
- the relation, *because* it is heteroconceptual, has also *greater explanatory power* with respect to the family of alethic phenomena it analyses,

are to be distinguished from a third fact, namely that

- the relation of correspondence is *heteroconceptually structured as more basic*, but is not *homoconceptually more primitive* than the notion of truth.

Rephrasing it in the more intuitive terms of a linguistic practice, this means that since the noun can be resolved into the adjective, if we exclude mere redundancy, there is no more fundamental, *homoconceptual* truth-relation into which the adjective can be resolved and, since the analysis of the adjective can be conducted either on a *definitional* or on a *criterial* basis, it follows that the same dichotomy is applicable to any theory of the *noun* and—if we disregard for the moment problems pertaining to the *epistemological aim* connected to one or the other approach—theories of truth can be conveniently distinguished into definitional and criterial.

All this does not hold true for the second half of the initial equation, for the class of theories of justification cannot be reduced to the class of theories of the property P_j without conceptual decrement. In order to see why, let us assume that the two schematic letters p and q are variables ranging over a domain of declarative sentences which are not self-referential (I shall explain the rationale of this anti-Cartesian clause below). Whenever p and q are associated, p is the *justificans* and q the *justificandum*. Although P_j can be resolved into a relation (R_j) occurring between p and q —i.e. $R_j(p, q)$ — R_j is *homoconceptual* with respect to P_j : *the justificatory link* which connects p with/and q (the choice of the type of connection depends on whether the justificatory relation is interpreted as symmetric, asymmetric or

non-symmetric, and again I shall say more about this when dealing with foundationalism and coherentism) and has allowed us to qualify *q* as justified is in itself a justification which, in its turn, is subjected to further justification. And since if

- i) *P* is a relational property analysable in terms of *R*; and
- ii) *P* and *R* are homoconceptual; then
- iii) *R* is the necessary and sufficient condition for the occurrence of *P*, *R* has no more explanatory power than *P* and *P* is *homoconceptually derivative or secondary with respect to R*; it turns out that
- iv) *P_J* is to be treated as the direct outcome of a homoconceptual relation *R_J*, which is both more fundamental than and constitutive of *P_J*.

Therefore, holding that any analysis of justification (noun) is either a definitional or a criterial analysis of *P_J* (adjective) would be imprecise and misleading because it is inadequate to say that any analysis of justification must investigate *P_J* as the *homoconceptually primary* notion.

2) Thus we can turn to the second problem affecting unqualified use of the dichotomy in order to *classify any theory of justification*. A possible way of solving the difficulty just seen would be to enlarge the distinction definitional vs. criterial into a four-term version, whereby *both* a theory of the property *P_J* *and* a theory of the relation *R_J* could be either *definitional* or *criterial*. Such a suggestion would be satisfactory if it were not for a second, more challenging difficulty. I shall maintain below that the four-term approach just introduced turns out to be instructive as far as the interpretation of the logic underlying the historical development of studies on the nature of justification is concerned, but it is unsuited as a scheme for fixing a definitive rational pattern of such theories. This is because it does not consider the crucial question of the *epistemological purpose* of a theory of justification, an issue that already has some importance in the theory of truth. Three observations will suffice to clarify the point.

- a) It is obvious that the stronger a criterion is logically, the safer it becomes methodologically, though not necessarily the easier, to implement the epistemological task which has motivated the elaboration of such a criterion in the first instance.
- b) As in the theory of truth, so too in the theory of justification, a *definition* of the necessary and sufficient conditions for a justifiable *justificandum* to count as actually justified can provide an *authorising criterion* to determine whether it is the case that $P_j(PJB)$ but not necessarily *vice versa*, and every *authorising criterion* can provide a *guaranteeing criterion*, but not necessarily *vice versa*. Thus, a definition of what it means for PJB to be P_j provides the *logically* strongest and therefore safest, though by no means most heuristically versatile, instrument to decide whether $P_j(PJB)$.
- c) From the point of view of the epistemological purpose, if a definitional approach in the theory of truth may not have, or at least if it is doubtful whether it should aim to have, a *criterial* and hence a *normative* function of *selection*,¹³ we have seen that in the theory of justification a similar, discriminating intent is the most important reason for having a theory of justification at all. As far as epistemological purposes are concerned, a theory of truth tends usually to be *descriptive* and *explanatory* and therefore it may be *purely definitional*, whereas a theory of justification usually aims at being *normative* and *justificatory* and therefore it is essentially *criterial*, the origin of this difference resting—the reader will recall—on the classic normative project, shared by many epistemologists after Descartes, of separating mere beliefs from real instances of knowledge on the basis of their epistemically justified nature.

It follows that, because of their epistemological aim, investigations about the nature of P_j will tend to focus initially mainly on criterial

¹³ See for example what S. Haack writes on the debate between Mackie and Tarsky in *Philosophy of Logics*.

and selective aspects, but in the long run they will gradually tend towards a logically safer, definitional approach to P_j —which might be at the same time criterial and normative—for reasons connected with the logical force of a definition. Aiming at the discovery of sufficient criteria of epistemic selection, theories will be inclined to fasten these to the strongest of all logical grounds, namely a definitional interpretation. And since guaranteeing-&-criterial theories of P_j will rationally tend to become authorising-&-criterial theories, and the latter will be logically disposed to transform themselves into definitional theories of P_j , it turns out that maintaining a sharp distinction between a definitional and a criterial approach is far more difficult in the theory of justification than in the theory of truth.

I mentioned above the historical development of studies on the nature of justification and suggested that it agrees with our previous logical analysis. The controversial opinion has been put forward that most contemporary discussions of knowledge and justification have been concerned with *definitional aspects* of the issue but have provided very little in terms of *criterial results*.¹⁴ But such a suggestion is in clear contradiction not only with the logical principle expressed above, to the effect that definitions of P_j provide at the same time the logically strongest basis for a criterial approach, but above all with the most widely held—and I take it correct—opinion in the literature concerning the actual development of studies on the nature of justification: most of the work done in the last twenty years has aimed, normatively, at specifying the *conditions* under which S' beliefs are justified and much less effort has been put into explaining both the *logical nature* of the justification and *what it is* for a belief to be actually justified.¹⁵ The reason is that Gettier-type problems have led

¹⁴ Cf. D.-H. Ruben, "A Note on Justification: its Definition and its Criteria".

¹⁵ See for example p. 81 of W. Alston "Concepts of Epistemic Justification", *The Monist*, 68 (1985), now in *Epistemic Justification* (Ithaca-London: Cornell U. P., 1989), pp. 81-114; and K. Lehrer, *Theory of Knowledge*, (London: Routledge, 1990), p.13 ff.. Note that Alston has a similar

epistemological studies to investigate first and foremost criterial issues about whether, and if so, how a belief may be safely justified for a knowing subject S, and only afterwards have definitional problems concerning the logical features of justification acquired their importance. Not surprisingly, the dynamics of the epistemological analyses and of their historical development coincide.

5.1.2. *Justification as a Property*

The overview provided so far can be made sharper by observing that a criterial and normative theory of the nature of P_J has two ways of acquiring a definitional basis, which we have seen to be logically stronger:

- 1) it may base itself upon a definition of P_J ; or
- 2) it may base itself upon a definition of R_J —perhaps via an assimilation of criteria for establishing whether $P_J(PJB)$ to criteria for establishing whether $R_J(p,q)$.

The former option leads to *reliabilism and deontologism*, two approaches that elaborate “epistemologically-criterial” theories of justification favouring a *definitional* interpretation of P_J . Usually, these theories tend to privilege the subjectivist aspect of the propriety “being justified”, that is they tend to concentrate on what it means “to be justified” for a knower S.

The latter option leads to *foundationalist versus coherentist*, and then *falsificationist* theories which, being more sympathetic towards an extensionalist interpretation of the concept of knowledge, pay more attention to the definitional interpretation of the relation R_J , among members of the two classes of *justificantes* and *justificanda* within the system of potential knowledges. They attempt to explain what the justificatory relations R_J between p and q can be and how such relations can assign the property P_J to q .

perspective to Ruben’s on the dichotomy between criterial and definitional approaches to the theory of justification as a property.

In order to analyse both groups of theories, let us assume, for the sake of simplicity, that the schematic letter q whose substituends are declarative propositions can also be used instead of the longer “the proposition that q ” and that $PJB =_{\text{def.}} q$. It follows that $P_J(q)$ can have three *subjective* meanings:

- i) q is justified for S (*propositional* justification); or
- ii) S is justified in *believing* q (*personal* justification); or
- iii) S' *believing* q is justified (*doxastic* justification).¹⁶

I have highlighted “believing” in order to make it explicit that S' doxastic state is not to be understood as equivalent merely to “entertaining the possibility of q being justified”, or to “wondering whether q is justified”, but rather as the state of giving well-thought-out, full assent to the fact that q is justified. Turning now to the analysis of the three alternatives, both (ii) and (iii) are unmistakably subjective. In them the property P_J shifts from being a feature of the declarative content to characterising the doxastic (dispositional) state/s of S . And since (iii) implies that S actually believes q , whereas (ii) states more weakly that if S were to believe q he/she would be justified in doing so, we can associate (iii) with (ii) and limit our further considerations to the two terms *personal* and *propositional* justification.

The subjective nature of propositional justification (i) is more ambiguous than in the other two cases, in that “ $P_J(q)$ for S ” can mean either

- i.a) $P_J(q)$ according to S ; or
- i.b) $P_J(q)$ *also* according to S , i.e. $P_J(q)$ and S acknowledges the fact that $P_J(q)$.

In the former version, the justificatory issue is twofold, since (i.a)

¹⁶ I am here adapting some of the technical terminology introduced by J. L. Kvanvig and C. Menzel “The Basic Notion of Justification”, *Philosophical Studies* 59 (1990), pp. 235-61. A similar distinction had already been introduced by M. B. Naylor in “Epistemic Justification”, *American Philosophical Quarterly* 25 (1988), pp. 49-58 in order to defend a deontological approach.

means that, *in favourable circumstances*, S is also *justified* in believing $P_j(q)$. Thus, in so far as the justification of S in believing q is concerned, the first half of (i.a) is just another way of formulating (ii), while in so far as the justification of q alone is concerned, the second half of (i.a) contains an *objective* sense of justification which relates it to (i.b). They both imply that q may be justified no matter whether any S recognises this fact or not. According to such an *objective approach* to the nature of P_j , the clause “for S” in the formulation of the *propositional justification* can be *redundant*.¹⁷

The distinction just introduced helps us to perceive why any attempt¹⁸ to reduce personal-subjective justification to propositional-objective justification turns out to be either trivial and uninteresting—when we interpret (i) in terms of (ii) via the first half of (i.a)—or impossible, when we interpret (i) in terms of (i.b), no matter whether independently from the second half of (i.a) or not. Of course the question depends more generally on whether we adopt a unique sense of “being justified” as a necessary condition for such a reduction. If we are, then we are begging the question since, although it is true that

*unless one is employing the notion of justification in two different senses [my emphasis], it is unimaginable what it would be like for a believing to be justified while its content failed to be justified*¹⁹

¹⁷ For a similar analysis see B. Aune, “Epistemic Justification”, *Philosophical Studies* 40 (1981), pp. 419-429; on propositional justification see E. Conee, “Propositional Justification”, *Philosophical Studies* 38 (1980), pp. 65-68; whereas on subjective justification see G. De Pierris, “Subjective Justification”, *Canadian Journal of Philosophy* 19 (1989), pp. 363-382.

¹⁸ Cf. F. Feldman, “Epistemic Appraisal and the Cartesian Circle”, *Philosophical Studies* 27 (1975), pp. 37-55, and J. L. Kvanvig and C. Menzel, “The Basic Notion of Justification”, *Philosophical Studies* 59 (1990), pp. 235-261. The latter maintain a somewhat more radical position from the point of view of a formal reduction, which is conceptually similar, however, to Feldman’s.

¹⁹ J. L. Kvanvig and C. Menzel, “The Basic Notion of Justification”, p. 239.

it is also equally evident that by virtue of such a semantic reduction we are presupposing precisely that identity of meaning between personal and propositional justification which was at stake in the reduction. If we are not, but maintain an initial plurality of meanings, the attempt to reduce (ii) to (i), i.e. personal to propositional justification, is tantamount to confusing the conditions which render possible the *deontological appraisal* of S' epistemic behaviour—among which there may certainly, although not exclusively, be considerations about q's justifiedness—with the conditions which make possible the *epistemological assessment* of q's justifiedness. It is a variant of the Humean fallacy of inferring "ought" for "is".

The simple conclusion to be drawn from the preceding analysis is that a *logical reduction* of (ii) to (i), with its strict, formal requirements, is impossible for the two notions of subjective-&-personal and objective-&-propositional justification, together with their corresponding sources, can be thoroughly independent of each other. There are still two important senses, however, in which subjective-&-personal and objective-&-propositional justification are closely related, despite their semantic independence.

a) Objective justification tends to be considered more fundamental than subjective justification. Such a *conceptual ordering* is due to the kind of logical valve already encountered in the previous quotation. *Ordinarily*, the fact that $P_j(q)$ can always be sufficient to justify S in believing q, but the fact that S both believes q and is *justified* in doing so is *very rarely* sufficient to establish $P_j(q)$. The qualifiers "ordinarily" and "very rarely" are there to remind us of an important exception that we have already encountered: the Cartesian *cogito* or, more generally, any case in which, thanks to the self-reflective nature of the propositions in question (the reader is now reminded of the way we have described the two schematic letters p and q above), S is *undefeatably justified* in believing q, that is cases in which it is logically impossible for S to be unjustified in believing q (defeasibility definitions of knowledge say that in order for S to know q, S must not only have a justified true belief with respect to q, his evidence

for q must also not be defeated). Such exceptions can only reinforce our suspicions about the possibility of a formal reduction of (ii) to (i): there are even cases in which subjective forms of justification can be interpreted as being capable of grounding further objective forms of justification. But we do not need to overemphasise their occurrence. Even taking them into account, we may still hold the view that, usually, objective justification is more fundamental than subjective justification, and present our justifications for believing q by indicating (what we take to be) the objective justification supporting q . The hope is that experience can justify S in believing q by providing a possible access to, or by being informative about, the objective justification of q , as was thought to be the case in Aristotelian-scholastic epistemology.

b) Holding that propositional justification is usually more basic than personal justification does not amount to maintaining that the *epistemic* property of “being justified” can be conceived as intrinsically *knowledge-independent*. Let us revert to the theory of truth and the alethic predicates. Whereas we can conceive that there may be propositions which are in themselves true/false but whose truth-value is intrinsically—that is, not just accidentally but for constitutional reasons connected to S and/or to the proposition—unknowable (Fermat’s last theorem seemed to be a similar case until recently), it is much more difficult to understand how q could be justified without there being the *possibility* of S recognising at least a minimal degree of the justificatory state of q . There are at least two reasons why the possibility of formulating q can be independent of the accessibility of q ’ truth-values, but not of the accessibility of at least a minimal degree of q ’ epistemic justification. Firstly, because the very unknowability of q ’s degree of justification already provides, reflectively, a negative but still informative indication about the justificatory status of q . It is one of the usual effects of the ubiquitous nature of the notion in question. Secondly, because once we have acknowledged that q ’s minimal degree of justification is represented by its

consistency with respect to a set of propositions W^{20} (where by “consistency” is to be understood nothing more than the mere logical compossibility resulting from the absence of contradictions, as in a semantic or syntactic *Tableau*), then the fact must also be accepted that formulability and minimal degree of q go together, and if there can be no S who has ever had in principle any access to any degree of justification of q , then q is not formulable and is also epistemically unreachable by S or, as Wittgenstein would say, it is mystical. This is a direct consequence of the well-known fact that it is impossible to formulate a proposition in complete semantic isolation, but then the very possibility of codifying q via a semiotic medium makes q part of a wider conceptual context, within which it is possible to formulate other propositions with respect to which q will either be consistent or inconsistent, thus giving S the possibility of evaluating at least its minimal degree of justification.

To summarise: when we say that the propositional justification of q is more basic than the personal justification of S we are not denying that epistemic accessibility of q and of its justificatory state by S is a necessary, integral aspect of its justifiedness. On the contrary, if q is somehow justifiable, it is also formulable and at least a minimal degree of its justifiedness must be potentially recognisable by S . However—if we exclude cases of internal, self-referential certainty like the *cogito*—the *epistemic accessibility* of q and of its degree of justification is never a *constitutive condition* of q ’s justifiedness. If q is justified, it must be so at least potentially and in some minimal degree *for S* but not *because of S*. S ’ being justified in holding that q does not affect q ’s justifiedness whereas q ’s justifiedness affects S ’

²⁰ P. D. Klein, “Knowledge Causality and Defeasibility”, *The Journal of Philosophy* 73 (1976), pp. 792–812 has introduced as the minimal degree of justification of p for S the “plausibility” of p , meaning that if p is plausible for S then it is more rational for S to believe p than to believe $\neg p$, cf. p. 804. However, the expression “more rational”, which plays a key role in the article, makes one suspect that the analysis may be affected by a vicious circularity.

justificatory state. Likewise, the subjective way in which or the reasons why S is justified in believing q can never be the source of the objective justification of q unless the subjective justification of S is identical with or includes a presentation of the objective justification of q (self-reflective nature of q).

That the justifiability of q implies the epistemic accessibility in principle of q's minimal degree of justifiedness is a logical fact which, unfortunately, does not safeguard us against radical forms of subjectivism. This explains why theories favouring a subjectivist interpretation of $P_j(q)$ can be so appealing. Since we are, or at least since there is no way of establishing with ultimate certainty that we are not, enclosed in our subjective view, we may be tempted to concentrate on the conditions which render *us justified in believing q*, either fearing that some warrant concerning the degree of justification of a subjective status may be the most that can ever be gained (the moderate approach), or hoping that, as in the Cartesian model, once it is clarified exhaustively whether and how we can be subjectively but also indubitably justified in believing q we shall also be able to prove that this is a direct sign that q in itself is objectively justified (the radical approach). In either case, both *reliabilism* and *deontologism* may present themselves as theories of justification *tout court*.

The two theories can be introduced by referring to the following distinction provided by Alvin Goldman

[...] there are two distinct ideas or conceptions of epistemic justification. On one conception [which he calls *strong justification*, *strong-J*], a justified belief is (roughly) a *well-formed* belief, a belief formed (or sustained) by proper, suitable, or adequate methods, procedures or processes. On another conception [which he calls *weak justification*, *weak-J*] a justified belief is a *faultless*, *blameless* or non-culpable belief.²¹

²¹ A. I. Goldman, "Strong and Weak Justification" in J. E. Tomberlin (ed.), *Philosophical Perspectives—2 Epistemology* (Atascadero CA: Ridgeview P. C., 1988), pp. 51-69, quotation from pp. 52-3.

Reliabilist theories are concerned with *strong-J*, that is with an “externalist” and “causal” conception of the notion of justification: S is justified in believing q if and only if S has reached the formulation of q via a reliable process. *Deontological theories*, on the other hand, investigate the *weak-J*, which is both “internalist” and intersubjective in so far as S enjoys the property of being justified with respect to a specific epistemic community. They study what is epistemically obligatory, permissible and prohibited, and hence the corresponding degree of reasonableness shown by S in believing q.²²

Goldman’s reliabilist position seems largely in agreement with our previous analysis: he holds that strong-J is more basic than weak-J since the former may work in terms of the latter but not *vice versa*. Obviously, the deontological approach is interested only in the *subjective* and thus weak sense of “being justified”. On the other hand, whether a reliabilist approach concerns a subjective or an objective, strong conception of justification is a question that can be answered only by establishing first whether by “belief” (b) we mean the dispositional attitude of S, which therefore must be interpreted in terms of “S is justified in believing q”, or the content-belief, which can be equated to q. Goldman has usually understood $P_J(b)$ as meaning roughly “b is reached by means of a cognitively reliable process”, but he has also generally interpreted “b” as standing for “S’ believing”. In one of the most influential formulations of his theory, for example, he has written:

The aim of this paper is to sketch a theory of justified belief. [...] I want a set of *substantive* conditions that specify when a belief is justified [p.1]. [Then] I do assume that a justified belief gets its status of being justified from some processes or properties that make it justified [p.2]. [And finally] A theory of justified belief will be a set of principles that specify truth-conditions for the schema <S’ belief in p [our q] at time t

²² Cf. M. Steuo, “The Deontic Conception of Epistemic Justification”, *Philosophical Studies* 53 (1988), pp. 65-84.

is justified>, i.e. conditions for the satisfaction of this schema in all possible cases.²³

What, at the very beginning, may look like a project for a theory of propositional justification which can establish when *q* is justified, is in fact a theory of personal justification which concentrates on whether and when *S* is justified in believing *q*. Goldman is concerned with strong, personal justification, and the statement "a justified belief is (roughly) a *well-formed* belief, a belief formed (or sustained) by proper, suitable, or adequate methods, procedures or processes" must be understood as meaning "*q* is justified for *S* if *q* is reached by a cognitively reliable method" and this as meaning "*S* is justified in believing *q* if he has reached *q* by means of a cognitively reliable method". Goldman is talking about "belief" not extensionally, in terms of a specific doxastic content, but intentionally, that is, in the subjective sense of having a disposition to believe or give one's assent to a particular mental content.

Although they are not as clear on this point as one may wish them to be, Kvanvig and Menzel²⁴ have objected that Goldman, in adopting a subjective conception of *P_J*, has also endorsed the restrictive principle whereby *to be justified is to be justified for an epistemic/doxastic subject*. Their attack would be appropriate if Goldman were talking about propositional strong-justification and not about personal strong-justification, as he actually does, and if Goldman wanted to "reduce" the propositional to personal justification, as he never seems to be clearly inclined to do. But Kvanvig and Menzel are correct in moving their objection, at least in the sense that, *if* reliabilism were to present itself as a theory of objective justification, it would be a failure. As a theory of *P_J(q)* it could not work for two main reasons. Firstly, in order to become a theory of propositional

²³ A. I. Goldman, "What is Justified Belief?" in G. Pappas (ed.) *Justification and Knowledge* (Dordrecht: Reidel, 1979), pp. 1-23, quotation from p. 3.

²⁴ J. L. Kvanvig and C. Menzel, "The Basic Notion of Justification", p. 249, but see also p. 252.

strong-justification it would be forced to misapply the principle, introduced above, whereby “there is no epistemic justifiedness without epistemic accessibility of the justified”. That is, it would be forced to take as a *necessary constitutive condition* of the justifiedness of q what is generally a *mere indicative signal* of the fact that q is justified, i.e. the fact that such a justification is detectable by S , in this case through “reliable” methods. Secondly, reliabilism would be forced to presuppose what it was meant to explain, namely the notion of “being justified” or “being able to justify”. This is an objection often formulated against reliabilism as a general theory of justification, and I shall discuss it at greater length in the last chapter. At the moment, suffice it to say that the meaning of “reliable” and other cognate notions is goal-dependent: a process is more or less un/reliable only with respect to a definite scope. So, in order to identify which methods are reliable we need a test, and the latter is generally provided by a certain extension of beliefs which we find already justified. We start from the justified in order to discover what leads to it, so that talking about “reliable methods” may be somewhat explanatory of S ’ epistemic behaviour—“reliable methods” are homoconceptually connected to “being justified”—but for precisely the same reason it can hardly provide a non-circular basis for a criterial and normative approach to what may or may not count as justified. Reliabilism is a theory which may aim at being criterial and normative only with respect to “ S being more or less un/justified in believing q ” and by being definitional with respect to the meaning of “being justified in believing”. Therefore, as an approach to the subjective sense of “being justified”, reliabilism would be meaningless without the clause “according to S ”. In Goldman, “proper, suitable, or adequate methods, procedures or processes” are rightly all S ’, in the sense of being available to, or employed by S . But if reliabilism cannot amount to a theory of $P_j(q)$ and is at most a theory of “ q being justified *according to* S ”, it will shift continually towards a purely deontological approach, i.e. it will naturally tend towards the investigation of “ S ’ being justified in believing q ”, where the justifi-

catory status of *q* in itself may be thoroughly disregarded as either irrelevant to, or scarcely more fundamental than, *S*' personal justification.

Epistemic deontologism is the only *pure* approach to the subjective sense of "being justified". No matter what type of deontological-epistemic appraisal is adopted—from blameless to faultless—any deontological theory will generally agree in considering *S* justified in believing *q* if and only if in doing so *S*' doxastic behaviour results in a sufficiently "rational" quality. As a study of the reasons which may drive *S* to believe something, a deontological theory can hardly aim at being a theory of the justificatory nature of *q* in itself. Being more closely connected to the psychology and sociology of knowledge than to the logical evaluation of it, the area investigated by deontological approaches is closer to the context of discovery than to that of justification, to adopt a well-established dichotomy. However, epistemic deontologism maintains the Cartesian criterial and normative aim as one of its central concerns, although it is no longer based on a foundationalist approach, but linked to the ethical field of evaluation of *S*' behaviour.

As I premised, I shall dwell at greater length on the further difficulties faced by reliabilism in the last chapter, where the theory will be subject to a number of criticisms from a perspective slightly different from the one adopted in this context. As regards deontologism, two questions can be briefly outlined here before we finally move on to the theories of justification as a relation.

Deontologism must deal with the controversial presupposition, not always made explicit by its defenders, of *complete doxastic freedom*. As in Descartes, the subject can rightly be assumed to be fully responsible for the assent he is capable of giving or withholding to a certain content only on the basis of a strong form of *epistemic voluntarism*, according to which *S* is completely free in his epistemic choices. Is epistemic voluntarism acceptable? Hume would have found it laughable and many contemporary philosophers would disagree with a position that naively disregards the importance of per-

sonal, cultural and historical factors in the doxastic choices of a human being. But any reduction of epistemic voluntarism is a step towards a relativistic muddle and away from a normative approach.

A further issue is represented by the difficult task, still faced by deontologism, of explaining why categorical principles—such as the one expressed by Roderick Chisholm,²⁵ according to which the primary intellectual duties of a knower are always to believe reasonably and to avoid believing unreasonably—are often in disagreement with the history of scientific discoveries. It seems that, fortunately, people have sometimes cared more about the enlargement and improvement of the encyclopaedia, e.g. by formulating apparently very unreasonable hypotheses, rather than “epistemically correct” behaviour. A lack of epistemological scruples may be very healthy for the advancement of knowledge, but deontological epistemic principles may be seen as conservative, for they tend to defend the *status quo*. Since reason is always historical, any appeal to its ultimate judgement runs the risk of being reactionary. That is also why Alston has felt the need to modify Chisholm’s position to a more moderate one, by restricting the extension of the class of beliefs subject to the deontological principle—in this case stating that truth must always be maximised while falsehood is minimised. Without qualifications, and a significant weakening of the “epistemic ought”, it is impossible to avoid the paradox according to which a subject who assented only to tautologies would be seen as irreproachable and more rational than a subject who was putting forward original and productive, though perhaps very questionable, hypotheses, thus behaving in a deontologically censurable way.²⁶

²⁵ R. Chisholm, “The Place of Epistemic Justification”, *Philosophical Topics* 14 (1986), pp. 85-92, cf. p. 91.

²⁶ Cf. R. Firth, “Are Epistemic Concepts Reducible to Ethical Concepts?” in A. Goldman and J. Kim, *Values and Morals* (Dordrecht: Reidel, 1978), pp. 215-29, who concentrates on the concept of justification as warrant, and argues that epistemic concepts are not reducible to ethical ones.

5.1.3. *Justification as a Relation*

We began this rather long digression into the logic of justification in order to approach foundationalism and coherentism from an angle which would allow us to interpret them also (but by no means inevitably) as apagogic solutions of the metaepistemological problem, working on the nature of the justificatory conditions that make the latter possible. In the reconstruction of the encyclopaedia, foundationalist as well as coherentist theories share a strong commitment to systematicity. The difference between the two approaches lies in the concept of justification they employ.²⁷ We have encountered theories that treat the notion of justification as a property of q , independent of the status of S . They tend to treat P_j as a secondary effect of a more fundamental and constitutive relation R_j between p and q . But all justificatory relations between two or more members of the set of knowledges can be (or can be interpreted according to patterns which are) either inferential, linear, one-directional and hypotactic, or coherentist, non-linear, bi-directional and paratactic. Foundationalist theories adopt the former, and, of course, coherentist theories the latter.

5.2. *Foundationalism*

Foundationalist theories elucidate the justificatory relation between potential members of the encyclopaedia in terms of an argument for a conclusion.²⁸ In this way the term "justification" acquires quite a broad meaning, since it becomes a label for the entire family of logi-

²⁷ For a synthetic presentation of their main features see S. Haack, "Theories of Knowledge: An Analytic Framework", *Proceedings of the Aristotelian Society* 83 (1982-3), pp. 143-158, which provides an overview of the major positions including "pure foundationalism" and "pure coherentism", together with several intermediate theories I have not discussed in this context.

²⁸ See K. Lehrer, *Theory of Knowledge* (London: Routledge, 1990), p. 13.

cal relations or operations which can make *q* plausible on the basis of *p*, or connect the acceptability of *q* to the acceptability of *p*, from semantic or syntactic entailment to enumerative induction, from abduction to statistical reasoning.²⁹ Obviously, a formal deduction of *q* from *p* e.g. via *modus ponens* remains the exemplary case. Here the justification can be interpreted in terms of conformity to a rule, the *modus ponens*, whereby we reach the *justificandum* *q* starting from the *justificans* *p*. So that if the lowest degree of justification of *p* is expressed by its logical consistency with respect to the other members of the set, the highest degree can be expressed by its logical deduction from knowledges already belonging to the encyclopaedia. Owing to this inferential model, all foundationalist theories agree in considering the justificatory relation between potential knowledge-bearers as *binary*, *asymmetric*—thus *generative of hierarchical structures and ordering*—truth-aiming (as the relation which leads from truth to truth³⁰) though not truth-conductive, and such that the propagation of the property of being justified does not incur any degradation, i.e. there is no effect of “noise” or entropy. This leads them to share an inclination towards an axiomatic paradigm, in which the justificatory flux progresses only one-way, from the axioms to the theorems, as it were. The entire set of knowledges acquires the form of an upside-down pyramid which is reconstructed on the basis of a finite and possibly limited number of fundamental statements whose epistemic value, in turn, must be ascertained to be immutable and in possession of the highest degree of justification, the latter being de-

²⁹ Thus E. Sosa has written that according to the “evidentialist” form of internalist foundationalism “there is a relation among propositions—‘fitting’ or ‘being supported’ or the like—such that a proposition is justified for one if and only if it ‘fits’ or ‘is supported by’ the relevant evidence that one ‘has’”. This sort of view has long been implicit in the writings of Roderick Chisholm, and recently it has received an explicit defence by Richard Feldman and Earl Conee”, see *Knowledge in Perspective* (Cambridge: Cambridge U. P., 1991), p.127.

³⁰ On this characteristic see p. 54 of A. I. Goldman, “Strong and Weak Justification”.

scribable in terms of indubitability or certainty, indisputability or evidence, irrefutability or other possible properties, according to the various programmes of research. Obviously, the latter point contains in itself the seed of the metaepistemological problem. Any form of justification, if understood as an inferential relation between p and q , can preserve and convey a certain degree of justification, but cannot bring it about *ex nihilo*.³¹ Therefore, in order for a potential member of the encyclopaedia to be justified, the most fundamental, possible instances of knowledge will have to be anchored to a previous basis which may be capable of communicating the required degree of justification without being in need of further support.³² It is easy to realise that this is nothing other than the metaepistemological problem illustrated in chapter four.

Some authors have thought that a solution to this difficulty could be envisaged by operating on the logic of the inferential concept of justification within the foundationalist paradigm. Unfortunately, an excessive infatuation with a deductive characterisation of the justificatory relation has led many such theories to misrepresent the real nature of the metaepistemological problem, by interpreting it in Aristotelian terms, i.e. merely as the problem of the *regressus*. According to such foundationalist theories, sceptical difficulties arise if and only if the justificatory relation between potential members of the encyclopaedia is interpreted as also being *transitive* and *non-*

³¹ R. Clark, "Vicious Infinite Regress Arguments" in J. E. Tomberlin (ed.), *Philosophical Perspectives—2 Epistemology* (Atascadero CA: Ridgeview P. C., 1988), cf. p. 373.

³² Besides the works already mentioned, the topic is discussed by N. M. L. Nathan in "Scepticism and the Regress of Justification", *Proceedings of the Aristotelian Society* 75 (1974-5), pp. 77-88 and in "What vitiates an Infinite Regress of Justification?", *Analysis* 37 (1977) 116-126; by J. N. Williams in "Justified Belief and the Infinite Regress Argument", *American Philosophical Quarterly* 18 (1981), pp. 85-88; by J. E. Harker in "Can there be an Infinite Regress of Justified Beliefs?" *Australasian Journal of Philosophy* 62 (1984), pp. 255-264; and by F. Adams in "The Function of Epistemic Justification", *Canadian Journal of Philosophy* 16 (1986), pp. 465-492.

reflexive.³³ Therefore, two common, apagogic tactics have been envisaged: the negation of the transitivity or the affirmation of the reflexivity of the justificatory relation. In fact, neither of these approaches turns out to be really efficacious, and this holds true even if we accept their initial analysis, namely the misrepresentation of the metaepistemological problem as consisting mainly in the *regressus*.

Wondering about the transitivity of the justificatory relation can be rather misleading. In the case of a relation such as "to be a relative of", we can have different interpretations of its logical nature depending on whether we are investigating the relationship in itself or one of the many relations which are specific instances of it. For example, "being a relative of" is obviously transitive, like "being the brother of", but "being the parent of" is not, though parents are obviously relatives. Likewise, though they are both types of justification, implication is transitive, but a relation of confirmation may not be.³⁴ Thus, too broad an analysis ends up by being generic. But this is not all. It must be admitted that the property of transitivity is not a necessary condition for the occurrence of the *regressus*, since it is too

³³ See O. Black, "Infinite Regress of Justification", *International Philosophical Quarterly* 28 (1988), pp. 421-437.

³⁴ The transitivity of the justificatory relation is defended, with reference to a knowing subject S and in doxastic terms, by R. Foley in "Inferential Justification and the Infinite Regress", *American Philosophical Quarterly* 15 (1978), pp. 311-316, but opposed both by O. Black, "Infinite Regress of Justification" and by J. F. Post, "Infinite Regress of Justification and of Explanation", *Philosophical Studies* 38 (1980), pp. 31-52. Black employs the principle of "defeasability" (p_1 confirms p_2 which confirms p_3 but p_1 does not confirm p_3 because $(p_1 \wedge p_2)$ do not confirm p_3) in order to show that confirmation is not necessarily transitive, but does not take into account the monotonicity of deduction. R. Audi explains the problem of "annullability" of confirmation very clearly in *Practical Reasoning* (London & N. Y.: Routledge, 1989), Chap. VII, entitled "The Assessment of Practical Reasoning". On the monotonicity of deduction see for example M. Sainsbury, *Logical Forms* (Oxford: Blackwell, 1991), p. 11.

strong a requisite.³⁵ The communication of justification, and thus the endless *regressus*, occurs even if the justificatory relation between p and q is understood simply as a binary, intransitive relation with an infinite recursivity. One needs only to think of the paradox of the hen and the egg to understand that no transitivity is required to implement it.

The study of the reflexivity of justification has given slightly better results, at least from the point of view of a conceptual clarification. In this case, the antisceptical manoeuvre develops in two phases. Initially, the class of all the justification-bearers is divided into two subclasses, one containing the justification-transmitters (JT), the other containing the justification-receivers (JR). At this point, the logical fact is ascertained that all JR can be JT but not necessarily *vice versa*.³⁶ The purely logical possibility now arises of solving the *regressus* by identifying the non-empty class of all the JT which justify themselves or are self-evident and hence do not need further justification. So the next stage is to uncover such a class. The "cogito", other facts of consciousness, intuitions, revealed truths, special sense-data or the so-called "given" have been all proposed as possible candidates. Sooner or later, the justification of other mediate propositions should lead back to such *immediately justified premises*, which although indemonstrable—since by definition there cannot be other justification-transmitters more fundamental and certain than them—are by no means doubtful, for they necessarily win our assent, *they force their truth upon the mind*, as Spinoza would say.

Two complications can be envisaged at once. The first is the distinction between the total certainty of a proposition and its truth, a

³⁵ In favour of a conception of transmittability of justification see C. M. Canary and D. Odegard, "Deductive Justification", *Dialogue*, 28 (1989), pp. 305-320.

³⁶ M. Deutscher introduces a similar distinction between transferable "reasons" and personal "grounds" to believe p in "Regresses, Reasons and Grounds", *Australasian Journal of Philosophy* 51 (1973), pp. 1-16.

distinction blurred by the previous reasoning. We have already seen how a clearer grasp of this issue leads to the Cartesian circle. The other is epistemological. What is justified can in its turn justify, but not all that justifies must necessarily be in need of further justification. This is true in purely logical terms. But speaking only of logical possibilities still leaves the epistemological difficulty which underlies the *regressus* untouched. The problem remains that, even assuming that there may be self-justifying or self-evident JT, there is no privileged access to their justificatory nature. On the contrary, each member of the original class can be individuated, formulated or selected only thanks to epistemic procedures and therefore the very theory which presents it must always be subjected to some kind of justificatory test. At most, we may be justified in entertaining the idea that the presence of such an initial set of JT is not self-contradictory, but we are unable to discover and characterise its members without entering into the justificatory game and hence ending up in the *diallelus*. Only a pre-modern metaphysical approach—which takes the mind as being informed by the object—can be sufficiently “realist” to de-responsabilise the knowing mind with respect to its ultimate certainties, which would be conveyed by the external reference in terms of absolute certainty.

5.3. *Coherentism*

The strengthening of Kantian transcendental idealism into Hegel’s absolute idealism adopts the Cartesian solution of the centrality of the “ego cogitans” together with its certainty, begins from general theory of all knowledge at the highest of all possible levels of reflection—since at this point the *ego* is no longer Cartesian-psychological but Kantian-transcendental and governs the entire domain of the encyclopaedia, not just his or her own beliefs—but attempts to overcome the fundamental dualism inherent in the transcendental strategy by abandoning a conception of knowledge as a relation between knower and known, that is as a sort of tool used by the subject to

deal with the external object. In the idealistic perspective, both mind and being participate in the laws of reason and therefore the reconstruction of the paths through which the mind knows being is, at the same time, the reconstruction of the phases through which being articulates itself. A philosophy of knowledge becomes a descriptive enterprise, in such a way that it does not admit anything extraneous into the picture. It is in this sense that it may also acquire a grounding valence, for the inferential and asymmetric notion of justificatory arguments adopted by all foundationalist projects is replaced by a coherentist interpretation.³⁷ A possible instance of knowledge is justified or true—now the two terms are synonymous—if and only if it is a coherent part of a more complex body of knowledge, which in its turn is the only real truth- or justification-bearer. As a holistic property of the system, the justificatory relation acquires a symmetric value. In some cases, or at a certain degree of complexity, elements of the encyclopaedia are partially justified by, while they also partially support, other members of the encyclopaedia. Being justified becomes a property linked to the mutual internal co-ordination of the components of the encyclopaedia. As an epistemic cement, the justificatory relation is a “double-sided” supporting connection, which has the property of being effective on both sides. As Sosa has put it

³⁷ Through Bradley's and Blanshard's coherentist philosophies, some authors have referred to Hegel's absolute idealism in order to anchor their anti-foundationalist and anti-Cartesian approaches, cf. J. P. Dancy, *An Introduction to Contemporary Epistemology* (Oxford: Blackwell, 1985), Chap. XII. For an interpretation of Hegel's philosophy as a reaction and solution to the Kantian version of the Cartesian circle cf. D. Lamb, *Hegel—From Foundation to System* (Dordrecht: Martinus Nijhoff Publishers, 1980), Chap. I, and T. Rockmore, *Hegel's Circular Epistemology* (Bloomington: Indiana U. P., 1986) and “Hegel's Circular Epistemology as Antifoundationalism”, *History of Philosophy Quarterly* 6 (1989), pp. 101-113.

according to radical coherentism, the basic source of epistemic justification is the internal coherence of a comprehensive body of beliefs.³⁸

Since the philosophical foundation of knowledge extends to the synthesis of all the conditions of every form of knowledge, in the idealistic approach the absolute and its logico-epistemic description correspond to each other and eventually they do not really differ. The entire systematic reconstruction of knowledge is supposed to occupy the whole theoretical space within which it is still meaningful to expect a justification of the theory. In this way, it suffocates the sceptical challenge, as it were, since in order to succeed the latter requires an initial acceptance of some fundamental dualism. Instead of being answered, objection³⁴ is gradually eliminated since, in the long run, scepticism is bound to be absorbed within the development and transformation of human knowledge, as one of its moments, that is as a critical phase necessary to, but at the same time possible to overcome by speculative reason. It is interesting to note that this feature of speculative systematicity has Kantian origins and becomes one of the matrices for a revival of a transcendental approach in some neo-Kantian philosophers like Leonard Nelson or Ernst Cassirer. It is not by chance that both appreciated Hilbert's programme in the philosophy of mathematics,³⁹ according to which the foundation of mathematics was to be achieved not directly, by means of straight deductions, but indirectly and metatheoretically, in terms of an exhaustive formalisation of all mathematical theories and the proof of their non-contradictoriness. Cassirer expressed the core of this approach, of which his *Philosophy of Symbolic Forms* can be interpreted as the corresponding, attempted realisation in philosophy, in an insightful observation which is worth quoting in German in order

³⁸ E. Sosa, "Theories of Justification: Old Doctrines Newly Defended" in *Knowledge in Perspective*, Chap. VII, p.113.

³⁹ Cf. B. Bianco, *J. F. Fries—Rassegna Storica degli Studi (1803 1978)* (Napoli: Bibliopolis, 1980), p. 32, and E. Cassirer *Philosophy of Symbolic Forms, Phenomenology of Knowledge* (Oxford: Bruno Cassirer, 1923), Vol. III, Chap. IV, sect. 3.

to appreciate its powerful tone:

Wenn der Gedanke das Unendliche nicht direkt ergreifen kann, so soll er doch im Endlichen nach allen seiten schreiten" ("although thought cannot grasp directly the unlimited/absolute, it is expected to cover the limited in all senses").⁴⁰

Whether the previous forms of idealism, which rank as ontologically extreme left-wing solutions, can really solve the foundationalist issue, given the difficulties concerning the possibility of constructing a total system of knowledge containing its own confirmation, is already questionable, considering the negative conclusion reached by Gödel in the far more formal and limited field of mathematical knowledge. Moreover, events during the last century have further undermined the empirical basis of a philosophy which appeals to a universal harmony of great intellectual beauty, but appears to fall short of a trivial sense of reality. It must be remarked, however, that to some defenders of one or another form of idealism both mathematical and historical knowledge, pure rationality and pure empiricism, appear as forms of knowledge of a lower type, whose nature cannot determine, but is rather in need of, a philosophical explanation. Thus, for such idealist philosophers nothing coming from a source external to philosophy itself could really affect a philosophical perspective, within which alone any other form of knowledge is liable to acquire a clear meaning. Never mind. Let us concede that philosophy is the ultimate level of discourse, which can be discussed only in its own terms. There is still a strong objection that can be directed against absolute idealism at an equally philosophical level. The idealistic approach may or may not amount to a solution of the foundationalist problem, depending on whether we are ready to subscribe to its initial appeal to a radically monistic vision of the universe and of human knowledge within it. It is only thanks to the removal of the mind/being dualism that the idealist can also dismiss the justificatory issue and replace it by an explanatory task. If there

⁴⁰ Cassirer, *Philosophy of Symbolic Forms*, Vol. III, p. 48.

is no real opposition between knower and known, the justificatory nature of the epistemological problem becomes that of a systematic and comprehensive explanation of how the parts cohere into a whole. It is a long time since any philosopher has attempted to write a new optimistic theodicy such as Hegel's⁴¹ and this is not just a matter of historical chance. We live in a post-Kierkegaardian world, in which philosophies more existential than Hegel's have been able to recognise the fracture between mind and being. They have acknowledged it; they are not responsible for its emergence. In attempting to re-compose the broken picture of the world and of our place in it, idealistic theories tend to lose the sense of the existence of external reality as something thoroughly independent from the epistemic, logical or symbolic activities of reason. The brute existence of the world is devalued in favour of a reason which is either placed somewhere other than in the brains of people—and we have in this case the theologically-flavoured form of objective idealism—or more naively understood as our rationality, as in the case of more anthropocentric forms of it. In either case, one fundamental point is missed: the search for a final foundation is motivated by the dichotomy between thought and matter, mind and being. It is only because we feel that there is a disparity between our way of thinking of the world and the way the world may be in itself, because we perceive that not all relations are internal relations or an articulation of a whole, because the world which we inhabit is different from the earth upon which we live, that we are in need of a foundation for our knowledge. Such a dichotomy is one of the most significant and profound innovations that we owe to modern philosophy,⁴² one further developed by post-idealistic philosophers such as Schopenhauer, Nietzsche and Kierkegaard. If we deny it at the outset, then we are back to a pre-Renaissance philoso-

⁴¹ See G. W. F. Hegel, *Lectures on the Philosophy of World History*, tr. by H. B. Nisbet (Cambridge: Cambridge U. P., 1975), p. 42.

⁴² See E. Cassirer, "The Subject-Object Problem in the Philosophy of the Renaissance", in E. Cassirer, *The Individual and the Cosmos in Renaissance Philosophy* (Philadelphia: Pennsylvania U. P., 1963), pp.123-191.

phy. In this sense, Hegel's idealism is a conservative position, a romantic appeal to revert to Greek or medieval monism, only more critically. Once the growing dualism underlying Western culture is intentionally neglected, rationality and reality, knowing and being may once again become two sides of the same absolute coin. But the unification of the two centres of epistemic and ontic power into a single and unique source of order requires a rationalistic panlogism which Voltaire, in his polemic against Leibniz, already considered scarcely acceptable in the middle of the eighteenth century. To endorse any form of absolute idealism today means to attempt an impossible and worthless step back into a cultural condition that the mind has superseded long ago, a natural harmony which can admit of contrasts and conflicts between parts belonging to the same whole that are not yet to be called subject and object, but cannot include an ultimately irreconcilable difference between mind and being. Idealism is no longer acceptable because it is blatantly inconsistent with the history of thought, which has progressively become more and more dualistic. Once it has emerged, thought's awareness of its peculiarity and independence with respect to reality can no longer be nullified and its history turns out to be one of increasing self-awareness of a progressive divorce from reality, not one of systole and diastole within an intact unity with being.

It would misrepresent the importance of absolute idealism to end this analysis without underlining at least one major, positive contribution it has made to the discussion of the metaepistemological problem. Hegel's considerable legacy consists in the recognition that the process of transcendental analysis aiming at a solution of the foundationalist issue must itself be self-reflective, both in that it must always be able to apply its own results to itself consistently, and in that it will have to include its condition of possibility among the issues to be discussed when dealing with the problem of a final foundation. Thus, the Hegelian contribution amounts to a lesson in total historicism. There is no reflection upon reflection from without. There is no perspective, from which we can consider the nature of

knowledge, that can be at the same time completely external to the process in question. We have come to know this requirement through Dewey's polemic against the so-called "God's eye perspective". We now know to whom this former idealist owed the suggestion.

5.4. *Falsificationism*

Due to the way we have arranged our material, we have already encountered the falsificationist approach, so we know already that this approach reacts to both the subjectivism and the justificatory logic within which the problem has traditionally been framed. Less metaphysical than those sketched so far, the dynamist strategy tends to reformulate objection⁴⁴ by dropping the requirement for a direct justification of the first principles of a philosophy of knowledge and in this respect it is on the right track towards an apagogic solution of the *diallelus*. I have already remarked, nevertheless, that as soon as the dynamist approach identifies in the justificatory requirements the aspect of the problem which needs to be *thoroughly* eliminated, its acceptability decreases dramatically.⁴³ Surely a very strict, justificatory logic represents an essential prerequisite of the foundationalist

⁴³ Popper's anti-justificationism has been contrasted with Wittgenstein's. G. Radnitzsky. "Analytic Philosophy as the Confrontation between Wittgensteinianism and Popper" in *Boston Studies in the Philosophy of Science*, 1982, (67), pp. 239-86 is rather generic (one wonders why Radnitzsky is reluctant to speak of "Popperians"); J. J. Ross, "The Tradition of rational criticism—Wittgenstein and Popper", *Proceedings of the Third International Wittgenstein Symposium*, August 1978, pp. 415-19 favours the view that the two converge; whereas W. W. Bartley III, "Non-justificationism: Popper vs. Wittgenstein", *Proceedings of the Seventh International Wittgenstein Symposium*, August 1982, pp. 415-19 criticises Ross' "compatibilism". On Wittgenstein's own position with respect to the debate over foundationalism vs. coherentism, see R. A. Shiner, "Wittgenstein and the Foundations of Knowledge", *Proceedings of the Aristotelian Society*, 8 (1977), pp.103-124 who combines Wittgenstein's theory of the limits of language with the hermeneutic circle, interpreting post-Wittgensteinian philosophy as anti-foundationalist.

problem and therefore the dynamist is correct in addressing this side of the issue. And yet, a complete abandonment, at any level and in all senses, of the Cartesian project for a foundation of our knowledge, and hence of an epistemology, prevents one from reaching a stage at which one may hope to gain certainty of any other general consideration about the nature of knowledge and epistemology, at least in principle, thus undermining the basis of the dynamic approach itself. The point has been already examined at length and we do not need to dwell on it any further. What one may still need to stress is the fact that the falsificationist proposal has helped philosophical reflection to separate the logic of the notion of justification from other questions at stake in the foundationalist debate and thus to clarify it as one of the main debatable components of the metaepistemological problem.

6. *The Lesson to be learned from the Past*

The previous survey, though still rather cursory, should be sufficient to make us appreciate the acumen shown by some of the most fruitful approaches to the metaepistemological problem so far. If there is any reason to think that we may be able to do any better, this is only because, as the classic metaphor reminds us, we are going to stand on their shoulders. Each past strategy introduces some interesting elements and we can conclude by summarising those factors that may help us orient our strategy against objection⁴⁴. Once this is done, we shall move on to the next chapter.

Husserl's *Prinzip* excludes any right-wing solution. Any successful approach must be empirically empty, i.e. will need to avoid being based on instances of knowledge extracted from Σ at $\mathcal{L}1$, in order not to commit a *naturalistic fallacy*. The logic of the fallacies of secondary effect has made it equally clear that solutions of the *diallelus* can only be *apagogic* and hence work at the level of the logical structure of the metaepistemological problem. Among the apagogic approaches examined, the dogmatic and the Cartesian strategies

make us aware that it may be useful to exploit the self-referential nature of the justificatory and sceptical procedure, although the dogmatic misrepresents the sceptical challenge and the Cartesian solution ends by being unable to escape the unextended starting point constituted by the *cogito*. The teaching imparted by Kant can be summarised as follows: to be effective, an apagogic strategy must also investigate the *ratio essendi* of the problem, the theoretical root which has led to its formulation. Thus the level at which the solution must work is not really $\angle 1$ —that is, from within the reflective activity of the Cartesian knowing subject—but the highest and most abstract level at which knowledge can be investigated, the transcendental level. By working at the transcendental level, a theory may be able to avoid the *internal* perspective of the psychological subject, while still retaining a historical nature. At the transcendental level, a theory becomes capable of interpreting the sceptical investigation as a phase in the development of the process which has led to the production of knowledge and therefore to its analysis and conditions of possibility. The objections moved against the Kantian proposal lead us to understand that what Dewey criticised as the “spectator theory of knowledge” is unobtainable. The examiner is never outside the process of knowing itself, and so cannot adopt a God-eye’s perspective from which to analyse the nature of knowledge. To say that a completely detached, external point of view is unachievable and therefore that a total, a-historical externalism is impossible, is tantamount to recognising the value of Hegelian historicism. The process of transcendental analysis cannot be thoroughly detached and different from the phenomena it analyses, but must be self-reflective, i.e. capable of coherently applying its own conclusions to itself. Such a total historicism implies that the transcendental level cannot be overcome. Any step beyond such a limit is a fallacious step into an allegedly external perspective, made possible only by a naive approach that is obviously unaware of the nature of the problem at stake. It also implies a further, more positive consequence: in order to be successful, any transcendental analysis must

be such that, *mutatis mutandis*, possible, further ways of dealing with the same issues, which may turn out to be equally successful in the future, will have to be interpretable as parts of the first theory and at the same time they will have to be able to interpret the first theory as one of their parts. By means of a visual image, one may say that the Hegelian notion of "supersession" can be translated into a holographic model: each single part of a hologram contains all the information required to reconstruct the whole picture, so that the whole picture can be interpreted as one of its parts. A further step is represented by the objection moved against the idealist approach. We have seen that a possible strategy should attempt to keep the "centre of ontic power" distinct and separate from the "centre of epistemic power". In terms of ontological realism, dualism is a far less costly attitude than idealism. In terms of the philosophy of culture, dualism—the idea that knowledge shall always be separate from its object and hence that the construction of the encyclopaedia does not amount to the construction of the ultimate reality—is the most intelligible interpretation so far of the development of Western thought. Falsificationism provides the last positive input. While working at the transcendental level with self-reflexive instruments, we should also look for a modification in the over-strict logical parameters dictated by the Cartesian conception of justification as a deductive relation. The hope is that all these requirements can be adequately satisfied by a transcendental, indirect investigation of the genesis of the process of knowing. This is what we are going to verify in the next chapter.

CHAPTER SIX
THE DISSOLUTION OF THE PROBLEM
A PROPOSAL

O Mentecatto!
Ecco tu chiedi pur quella certezza
Ch'a lei dispiace,
e che spiacer le deve Dirittamente,
e tu cercar non dei.
Ma chi t'accerta ancor che non sia tale?
Torquato Tasso, *Aminta*, Act II, 94

1. From Foundationalism to Coherentism

In order to introduce in this chapter what I consider to be one of the most promising types of apagogic strategy, we need to revert to the analytic formulation of the *diallelus* and re-examine the coherentist approach. At the risk of being repetitive, let me recall that the only prospect for avoiding surrender to the insolubility of the metaepistemological problem lies in the decision to revise part of the conceptual scheme within which such an impasse is inevitable. According to the coherentist proposal, Chisholm's foundationalist resignation is due to the tacit and erroneous presumption that, in the long run, the interconnection between criteria and extension of knowledge ends up by starting a circle which is inevitably *vicious*. Unlike Chisholm, the coherentist advocates the possibility of a different interpretation of the same phenomenon, a substantially positive one. Although the tactics for converting the *vicious* circle into a *virtuous* one can lead

to various configurations,¹ implementation of this approach essentially reproduces the logical structure of the self-regulative doxastic system of a historical knower expounded in chapter two, and discussed in relation to the falsificationist strategy in chapter five.² As Bradley writes, without drawing the necessary distinction between S' knowledge and a coherentist theory of knowledge:

My object is to have a world as *comprehensive* and *coherent* as possible, and, in order to attain this object, I have not only to *reflect* but *perpetually* to have *recourse* to the materials of sense. I must go to this source both to *verify* the matter which is old and also to *increase* it by

¹ See for example G. Vollmer "On Supposed Circularities in an Empirically Oriented Epistemology" in G. Radnitzky and W. W. III Bartley (eds.), *Evolutionary Epistemology, Rationality and the Sociology of Knowledge* (La Salle Ill. Open Court, 1987). Aristotle's analysis was probably responsible for the end of the positive evaluation of circularity in ancient thought, see L. Ballew "Straight and Circular in Parmenides and the 'Timaeus'", *Phronesis* 19 (1974), pp. 189-209.

² There are many examples of the structure of theories of knowledge following coherentist models, depending on what concept or key-element of the model is interpreted in coherentist terms, "truth", "justification", "system" etc.. For a position close to that expressed in this section see L. BonJour "Can Empirical Knowledge have a Foundation?", *American Philosophical Quarterly* 15 (1978), pp. 1-13 and *The Structure of Empirical Knowledge* (Cambridge Mass.: Harvard U. P., 1985). For an attempt to conciliate foundationalism and coherentism see J. W. Cornman "Foundational versus Non-Foundational Theories of Empirical Justification", *American Philosophical Quarterly* 14 (1977), pp. 287-97, reprinted in G. Pappas and M. Swain (eds.), *Essays on Knowledge and Justification* (Ithaca, New York: Cornell U. P., 1978) and S. Haack, in her *Evidence and Inquiry: Towards Reconstruction in Epistemology* (Cambridge: Blackwell, 1995). K. Lehrer has defended an influential coherentist position, see for example his "The Coherence Theory of Knowledge", *Philosophical Topics* 14 (1986), pp. 5-25 and *Theory of Knowledge* (London: Routledge, 1990). A useful overview is provided by the collections of essays edited by J. W. Bender, *The Current State of The Coherence Theory: Critical Essays on the Epistemic Theories of Keith Lehrer and Laurence BonJour with Replies* (Dordrecht: Kluwer, 1989).

what is new. And in this way I must depend upon the judgements of perception [my emphasis].³

The nature of the *petitio principii* is mitigated by transforming Chisholm's assumption into a theoretical choice. The theory then formulates a partially revisable hypothesis concerning either question E (What is the extent of our knowledges?) or question C (What are the criteria of knowledges?). The interconnection between extension and criteria of knowledges establishes a mutually regulative system, which presupposes a first selection of instances of possible knowledge, say Σ_a . The latter must be sufficiently rich but, admittedly, a more precise determination of Σ_a would be problematic. Of course, were Σ_a rather small the number of possible criteria elaborated on its basis would tend to be equally limited and therefore agreement between such criteria and their source would be more likely. The larger Σ_a is, however, the more criteria it will be possible to elaborate, and so the easier it will be to check, on their basis, the value of any member of Σ_a , applying different criteria to different members. Conversely, it also seems obvious that too large a Σ_a —too liberal a selection, which fails to accept only a marginal number of examples of what could count as *prima facie* genuine instances of knowledge—would make the elaboration of criteria on this basis practically useless both for checking the value of Σ_a -members themselves and for examining new items of knowledge coming from the encyclopaedia. Fortunately, in this context there is no need to establish the precise extent of Σ_a , for it is sufficient to agree that

i) an adequately rich class of m (for $m \geq 1$) *prima facie* genuine knowledges can be selected (answer to E)

and then that

ii) n (for $n \geq 1$) criteria of knowledge C_a can be elaborated on the basis of (i) (answer to C).

From such criteria the theory reverts to Σ_a in order to check whether

³ F. H. Bradley, *Essays on Truth and Reality* (Oxford: Oxford U. P., 1914), p. 210.

all members of the set are consistent with the established family of criteria C_a . Some of them might not be. If their number is suspiciously high, the theory can either check its criteria again, or it can simply decide to eliminate those members of Σ_a which have first prompted the criteria it is using. Once the feedback relation has reached a stable equilibrium between C_a and Σ_a (see the left arrow in fig. 3) then the original set Σ_a can be further extended, by including new members extracted from Σ , until the whole encyclopaedia has been analysed.⁴ Of course, as in Descartes, the process of selection and enlargement of the initial set needs not merely be quantitative, and hence endless, but can be grounded on the organisation of all members of Σ into a finite number of classes of knowledges (this is why the feedback process on the right side of fig. 3 does not give rise to an infinite regress). In the long run, the virtuous circularity of such a moderately coherentist theory produces a self-regulative system with an internal relation of total feedback between extension and criteria. Hypothetically, the revisability of the initial set of hypotheses is not unlimited, since it could not entail any high degree of self-falsification; however, the system is susceptible to improvement, since it can answer possible, limited questions formulated by the sceptic within the system itself. More schematically, we have:

⁴ M. Rosen, "Le Probleme du Commencement dans la Philosophie de Hegel", *Canadian Journal of Philosophy* 19 (1989), pp. 551-574, by focusing on the importance of dialectic in Hegel's thought, paves the way for the recognition of the crucial role played by a feedback relation within a coherentist reconstruction of the system of knowledge.

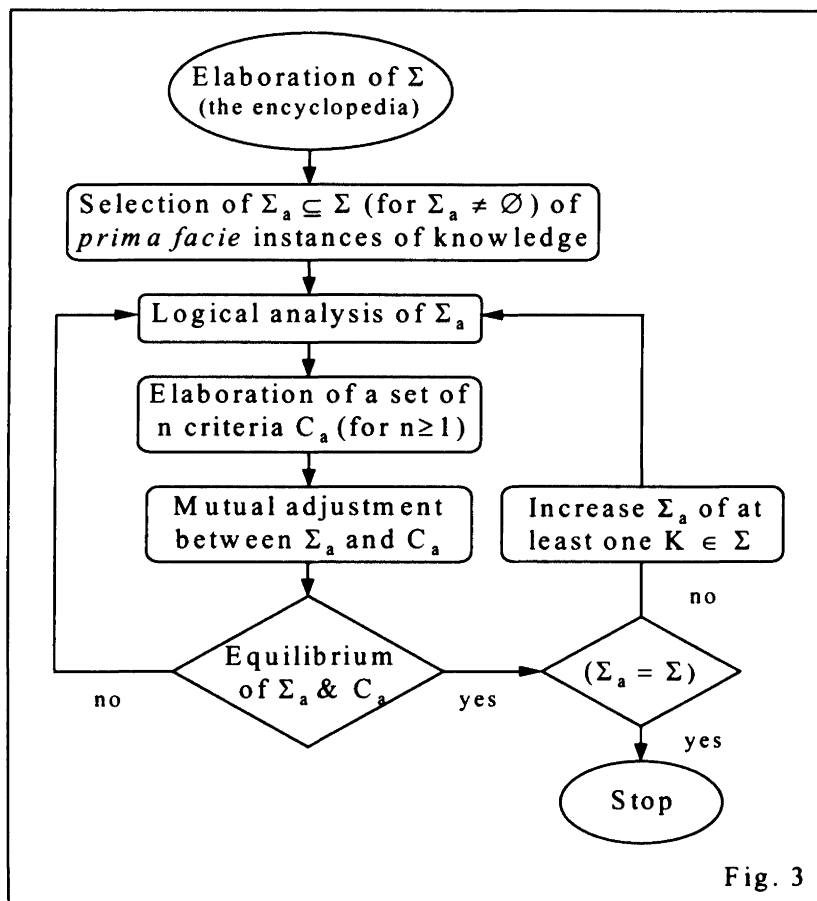


Fig. 3

The coherentist alternative that I have outlined seems to elude the unpleasant problem of Chisholm's submission to the *petitio principii* by achieving three important aims.

Firstly, it adopts a notion of justification which is neither purely *asymmetric*, like the foundationalist one, nor purely *symmetric*, like the coherentist one, but *non-symmetric*. Recently, there have been attempts to provide a defensible interpretation of a holistic and symmetric conception of the justificatory relation within Σ . Most nota-

bly, Laurence Bonjour⁵ has suggested that, by the coherence of a set of statements, we should understand something more than just logical consistency. The coherence of a system should be evaluated on the basis of at least four other parameters, namely:

- a) its degree of probable consistency. The smaller the number of pairs of statements such as “p” and “p is very unlikely” or “it is very likely that not-p” occurring in the system, the more coherent the system is;
 - b) the number and quality of mutual interconnections between its members;
 - c) the absence of sub-sets thoroughly disconnected from one another;
- and finally,
- d) the absence of inexplicable anomalies among the doxastic contents of the system.

However, the characterisation of the logic and the role of justification within a purely coherentist system remains problematic. By “being justified” we may *also* mean “having the property of belonging to a coherent body of knowledges which share such and such properties”. This is a tenet which all coherentists endorse and most epistemologists in general may find sensible. But such an equation differs quite sharply from the stronger coherentist thesis whereby the justificatory relations within the system of knowledges are necessarily symmetric, and therefore, strictly speaking, only the whole system of knowledge can be properly qualified as justified, not its parts. We know that the very intuitive notion of justification endorsed by the foundationalist scheme inevitably leads to the metaepistemological problem, so it would be convenient to replace it with a more coherentist-like conception, which may enable us to transform the metaepistemological circle into positive feedback. The symmetric conception introduced by a strongly-coherentist epistemology, however, seems to be constructed *ad hoc*, in that it looks as if it is tai-

⁵ Bonjour, *The Structure of Empirical Knowledge*, pp. 93-101.

lored *only* to the theory's need to overcome the metaepistemological problem, rather than being a feature of the system that reproduces a genuine aspect of the way in which the notion of justification is commonly employed. Now, similar quarrels concerning the nature of justification—it may be replied—can soon develop into a matter of theoretical preference. Admittedly, this is at least partially true, or at least sufficiently controversial as to leave enough room for drastic manoeuvre by anyone who may wish to refine the coherentist approach. A coherentist theory of justification, for example, might be combined with, or even supposed to require, a coherentist theory of truth and a strongly antirealist ontology of an idealist bent, as we saw in the last chapter. In the present case, however, we have opted for a more moderate policy.⁶ Only the relation between criteria and extension is taken to be symmetric, in the weak sense of effecting a feedback connection, whereas justificatory relations within the class of criteria and within the class of knowledges are maintained to be foundationalist-like, i.e. asymmetric. The moderately-coherentist theory adopts a conception of a supporting relation that works like an epistemic adhesive, when it is between criteria and members of the whole system of knowledges, and like an epistemic hook when working within each of the two classes. This choice brings us to the second positive feature of the theory.

Even if it is true that the theory is still starting somewhere within the wheel, it is equally true that it leaves nothing out of its logical investigation. The circular feature made possible by an asymmetric conception of justification has precisely the merit of allowing the theory to revise all its contents, including its own starting point and, if necessary, improve its own epistemological presuppositions.

⁶ Lehrer has argued in favour of a moderately-coherentist support of a foundationalist justification of instances of knowledge in "The Knowledge Cycle", *Nous* 11 (1977), pp. 17-25, interpreting the coherentist system as a metatheory for deciding what epistemic principles to accept within the foundationalist theory.

Chisholm's proposal—as BonJour pointed out⁷—merely rejects the possibility of the ultimate sceptical objection by a *fiat* which is the point really in need of justification. However, the moderately coherentist interpretation of the *diallelus* lets the sceptic play his game within the limits of an acceptable epistemological field. Moreover, the internal, dialectical relation between extension and criteria avoids the foundationalist idea of a long chain of justifications and makes the structure of a theory of knowledges closer in style to what has been supposed to be the real epistemic activity of a historical subject, a feature not to be undervalued, seeing that initially the only available input for a theory of knowledge are historical instances of human knowledge.⁸

Finally, the coherentist alternative seems to resolve the sceptical metatheoretical objection. For it looks as if virtuous feedback would present no unwarranted postulate against which the sceptic may then mount his objections. Apparently, it is sufficient to withhold the sceptical questioning until the theory has reached a satisfactory revision of its coherent system of extension and criteria. Afterwards, specific elements inside the system will be challenged by the sceptic and possibly improved by the coherentist accordingly, but not the system itself as a whole, because of its departure from a *petitio principii*. Sceptical arguments against restricted and definite areas of the system will therefore raise a different variety of internal problems, which no longer resemble Sextus Empiricus' fundamental objection to the very possibility of a theory of knowledge. It appears that sceptical dissent is forced to evolve within the newly organised encyclopaedia, with the result that the theory can now cope with it by means of all the standard instruments already devised and secured

⁷ BonJour, *The Structure of Empirical Knowledge*.

⁸ I would not over-emphasise the point, however, as I agree with H. Kornblith that human beings do not and cannot arrive at their system of beliefs by determining whether they cohere with beliefs already held, see his "The Unattainability of Coherence" in J. W. Bender (ed.), *The Current State of The Coherence Theory*.

by our epistemology.

Unfortunately, on closer analysis there are still considerable difficulties afflicting the coherentist strategy. In particular, there are two problems that appear severely to undermine any ultimate confidence in such a coherentist approach. For even if we grant, as I shall, that in one way or another the asymmetric conception of the justificatory relation can be adapted to satisfy the exigencies of a more moderately coherentist reconstruction of the system of knowledges, the idea that a moderately coherentist-like epistemology, once elaborated, may be sufficient to escape the critical difficulty represented by the *diallelus* relies on two erroneous assumptions which, once rectified, show how the strategy, by itself and without further improvements, is eventually inadequate to achieve the ultimate goal of presenting a non-problematic organisation of a theory of knowledge.

2. Coherentism and the Problem of Internal Scepticism

It can easily be conceded that, according to a positive interpretation of the *diallelus*, the sceptical questioning, developed at the second level of our philosophical investigation, turns out to be incorporated within the system, but this does not imply that the sceptical challenge must proceed inevitably from an acceptance of the system, subject to the condescending jurisdiction of the coherentist, as it were. Even after having been embedded within the system, sceptical objections are not defused, for they do not have to be seen necessarily as a set of simple questions connected in a one-to-one relation to specific but limited topics offered by the theory of knowledge in question. On the contrary, as the most radical form of critical questioning, the sceptical strategy constitutes the reflective process whereby the *presuppositions*, and not solely the *findings* of a theory are opposed and eventually dismantled, in a backwards process. As an unrelenting method of inquiry into the roots of our knowledge, the sceptical arguments do not stop where the coherentist would like them to. The sceptic begins by arguing against some element of the system but

then progressively undoes the fabric, so to speak, that has been woven with extension and criteria of knowledges. Confidence that virtuous feedback may represent a sufficient and effective safeguard against the *diallelus* depends upon the conviction that an antecedent form of internal, more basic scepticism—that is a second level battery of sceptical arguments that precedes and leads to the metaepistemological problem—cannot gradually shatter the whole system from within. Such an assumption, however, is thoroughly erroneous, since the sceptical *regressus* encounters no real difficulty in achieving a final *reductio ad absurdum* of the whole system by retracing in reverse the same logical stages by which the coherent system has been constructed. One should not imagine, though, that the *regressus* assails and rebuts *from without* each single part of the whole coherent reconstruction of the encyclopaedia in a consecutive and systematic way, until the last fragment is reached. If this were the case, then we would not be working *inside* the system of knowledges, no matter whether the latter were constructed as a coherentist or a foundationalist one. What the second-level *regressus* can and actually does accomplish is to bracket each member of the entire set of knowledges Σ one by one. What has been bracketed—what has been prefixed by an *Index der Fraglichkeit*—requires the support of what has not yet been bracketed in order to be re-inserted within the system of knowledges. Only if the *regressus* can proceed right up to the very last member of the encyclopaedia does the sceptic achieve his goal. While the *regressus* is in progress, what is left behind are not non-instances of knowledge, but rather ex-knowledges that have become questionable under certain conditions, above all under the condition that what is still left untouched by doubts may be epistemically powerful enough to recover what has been already doubted. This latter condition can be fulfilled as long as there is at least one member of the set of knowledges that has not been shown to deserve to be doubted. Thus, if the process of destruction can be stopped, all the bracketed members of the system can immediately be thought to be able to re-acquire their full status of knowledges. On

the other hand, if the *regressus* can cover the whole extension of the system, the set of bracketed members is suddenly annihilated, all at once. The system of knowledges, by ending up composed of doubtful members only, collapses at a single blow, like a worm-eaten tree.

If the former is the most correct way of looking at the sceptical strategy, let us now suppose that the sceptical questioning has almost completed the process of bracketing. What will the coherentist answer to the metaepistemological question challenging the origin of the construction of the system? Any systematic reconstruction must in any case start its work somewhere. A circular philosophical theory has its weakest point exactly where the departure is epistemologically justified by the conclusions elaborated on its ground. The feedback relation gives rise to a network of justificatory relations, but each loop in the network may be thought of as a ring,⁹ where the starting point is an answer to the E-question and the end is an answer to the C-question. We can imagine that with the metaepistemological question the sceptic hammers on the soldered join of each ring. We

⁹ In *Evidence and Inquiry* Haack discusses the regress in the way most favourable to the foundationalist, and shows that even in this case he still has to realise that the combination of our beliefs does not form a unique long sequence, but rather a network in which internal relations are perfectly acceptable. With the help of an instructive crossword analogy, she shows how positive it would be to assume internal correspondences in our set of beliefs. So when we enlarge the problem to include the whole *diallelus*, Haack's approach rests on the possibility of denying that the set of beliefs gives rise to a "one-dimensional" sequence. We should rather speak of a network including the possibility of internal, mutual support. Such a form of "impure foundationalism" is very reasonable, and it does avoid the naive charge of vicious circularity put forward by a superficial sceptic. But we have seen that there is no reason why the sceptic should grant to the foundationalist that the regress works in his favour. And once we have adopted a more critical stance, it is undeniable that the internal loops cannot represent a really substantial improvement in the justificatory state of the web of beliefs *as a whole*. For an analysis of Haack's position see my "Followers of French Fashions: Neo-Cartesianism and Analytic Epistemology", forthcoming in *Philosophy and Phenomenological Research*.

are now aware that the coherentist will not be able to point to the value of the criteria elaborated on the ground of his first assumption and whereby the whole set of knowledges has been checked, for this is just what the sceptic has challenged by climbing up to his actual position (lack of criteria). Our coherentist will not even be able to answer the sceptical question by stating that the good extensional development of his first assumption supports it as a valid assumption, as the one which allows one to select a suitable extension of knowledges. For justifying the assumption on the ground of its results in terms of contents would again presuppose that the rest of the system has not already been questioned and bracketed, when indeed it has (lack of extension). In such a position, our coherentist will be forced to admit that the sceptical *regressus* and the following *reductio ad absurdum* have showed that, in building his system, he simply started where he thought it was best to start, regardless of whether "where" is an instance of extension or of criteria of knowledges. Whatever the nature of the starting-point is, and no matter why he thought it was best to start "there", from this admission onwards any answer to the sceptical questions will necessarily amount to an implicit *petitio principii*. Its last segment having been challenged, the entire system disintegrates abruptly.

Before accepting Chisholm's conclusion, our moderate coherentist seems to be left with three ways of defending his position, none of which, however, is really effective. Having recognised that the sceptical destructive *regressus* is fatal for his theory, he can:

- a) not allow the sceptic to start the *regressus*;
- b) stop the sceptical *regressus* somewhere; or
- c) concede that the sceptical *regressus* can merely sabotage the value of the organisation of the coherentist epistemology from within, but deny that it has any consequence for the nature of knowledge in itself.

Each of the previous alternatives endorses a more or less strong form of holism. The first two also represent a form of dogmatism, which commits the same fallacy of *petitio principii*, but just in a different

way. The last alternative is the only one of any interest and deserves to be discussed at greater length.

The compromise between acceptance of the destructive power of the sceptical *regressus*, as applied against the coherentist reconstruction of the encyclopaedia, and denial that this may have any consequence for the nature of knowledge in itself, calls for a distinction between the way a theory of knowledge can be constructed and the real features of its object. No matter how it is formulated, the introduction of a distinction between the work of an epistemology, on the one hand, and the actual nature of knowledge on the other, leads to an admission that a philosophical theory can be dismantled, while arguing, at the same time, that this is so only because a theory cannot avoid being explicitly formulated in stages, whereas knowledge in itself remains untouched by the sceptical attack because it enjoys such a strongly holistic and fluid nature (remember Mary's doxastic system) that it persists as a compact and coherent system of intermingled extension and criteria. It is the distinction between the blueprint of a machine and the actual machine itself, with the difference that the machine in question is treated as a natural product. Knowledge as a human phenomenon did not come to be through separate stages but forms a complex that cannot be pierced without losing its very nature. By assuming such a defence, the coherentist shows himself to be ready to accept the sceptic's destruction of the organisation of a theory of knowledge, while apparently rescuing the logical possibility of there being knowledges in themselves, untouched by the sceptical objections. An intuitive analogy may help to clarify the point further. Compare the difference between a stone as a coherent whole system—where coherent means here nothing more than “having the quality of staying together”—and a cloth that covers it, woven from a single strand. The sceptical destructive *regressus* would concern only the cloth, not the stone. Assuming a tactic exactly opposite to that of the cognitivist in chapter four, the coherentist gives in to sceptical pressure by renouncing the theory, in order to rescue the essence of knowledge. He admits that, in so far as a

theory must be elaborated, it must also assume a point of departure and therefore remain prone to sceptical criticisms. But he also contends that the historical system of human knowledge is a holistic whole which contains no fracture, only *temporal successions* but not *logical priorities*. In such a compact complex, there is no space for a *starting point* at any soldered join. The very idea of a *petitio principii* therefore becomes unintelligible by definition. The historical content of knowledges cannot be affected by the sceptical objection. In a word, the encyclopaedia and its transmission remain, in themselves, indisputable by definition, even if no non-fallacious theory of them can be provided.

Persuasive as it may be, unfortunately this defence amounts to exactly what the sceptic wants the coherentist to admit in the present context, namely that a theory of knowledge is based on some basic *petitio principii*, or indeed that it is not grounded at all because it depends on a *petitio principii*. And precisely because the third alternative (c) can rescue at most only the logical possibility that the phenomenon that we call human knowledge may be an actual case of real knowledge, but does not save a theory of knowledge, which would then be capable of assessing such a phenomenon, because it is anchored to a *petitio principii*, (c) is of no use to solve the *diallelus*. Even worse, in the long run (c) cannot but undermine all possible efforts to grasp and evaluate the nature of knowledge, for such attempts could only be made by an epistemology whose non-fallacious feasibility has now been negated. As a result, we are back either to the Chisholmian acceptance of the inevitability of an initial fallacy, or to the same situation we encountered when discussing the possibility of a radical falsificationist solution. Either we beg the question, and accept whatever presumptions we decide to endorse, or we are left with nothing at all in our hands.

3. Coherentism and the Problem of External Truth

We come in this way to the second, radical problem affecting the

coherentist strategy. Suppose difficulties arising from the sceptical *regressus*, which undoes the coherentist system from within, could somehow be circumvented. Even if the coherentist were able to save the value both of knowledge and of the circular organisation of a theory of it, there is a second series of decisive obstacles which he cannot overcome, since its source is ingrained in the very nature of the strategy adopted by any form of coherentism. When it contends that the only difficulty concerning the *diallelus* is that of being a *vicious* circle, the coherentist position partially misconstrues the problem, for it disregards another crucial factor, namely that the problem with the *diallelus* is *also* represented by its circularity *tout court*, not merely by the vicious or virtuous nature of the latter. Were the sceptic arguing only that the coherent theoretical system of extension and criteria of knowledges relies on a *vicious* circularity, then perhaps the coherentist could find some remedy. But the sceptic also objects that the whole theoretical system, arising out of the coherentist analysis, is like a sphere which in itself is not anchored to anything else, by definition, and that the coherentist approach is confronted by the impasse represented by the familiar gap between coherence and truth (where the concept of truth can be understood in any weak form of satisfactory relationship with the external object of knowledge).¹⁰ The coherentist strategy shares with the Cartesian such an internalist nature, and once again this constitutes both its strength and its weakness. For just as the Cartesian strategy finds it hard to connect indissolubly the internal certainty of a subject's beliefs and their external objects, and hence to classify them as true, so the coherentist strategy is confronted with the problem that the internal coherence of a systematic reconstruction lacks an external input (if it relied on one it would be a mixed system, which however

¹⁰ For arguments in favour of the Cartesian distinction between truth- and justificatory values of a belief see S. Cohen, "Justification and Truth", *Philosophical Studies* 46 (1984), pp. 279-95. P. D. Klein and T. A. Warfield have explicitly argued that coherence, *per se*, is not truth-conducive in "What Price Coherence?", *Analysis* 54 (1994), pp. 129-132.

would still be unable to solve the metaepistemological problem of its own justification by appealing *directly* to its external input without lapsing into a *petitio principii*¹¹) and does not escape from its own limits. Paradoxically, the coherentist system could be just a consistent development of a radical, well-elaborated error bearing no relation to the external world, as we are reminded by countless examples in the history of ideas.¹² In the previous chapter, I endeavoured to prove that only some form of idealism—which unifies the two centres of epistemological and ontological power, but which also turns out to be too costly in terms of realism precisely for this reason—can actually bring a purely coherentist program to its ultimate consequences and attempt to accomplish it. What may now be added is that the situation deteriorates even further, once the *normative value* of the coherentist theory is taken into account. Because of its *petitio principii*, a coherentist analysis of knowledges ends up either by merely confirming whatever previous opinions about the nature of knowledges it decides to start from, or by contradicting such opinions without any reason other than that they are not in agreement

¹¹ Cf. S. Haack "Double-aspect Foundherentism: a New Theory of Empirical Justification", *Philosophy and Phenomenological Research* 53 (1993), pp. 113-128.

¹² S. Silvers, "Coherence, Observation, and the Justification of Empirical Belief" in J. W. Bender (ed.), *The Current State of The Coherence Theory* has analysed the standard problem of the acquisition, by a coherent system of beliefs, of an external input represented by empirical content showing how this is a problem for a coherentist theory such as Bonjour's. On the other hand, W. A. Davis and J. W. Bender have argued, chiefly against Lehrer's version of the coherence theory, that coherence of a belief to the system of other beliefs is neither a necessary nor a sufficient condition for the empirical justification of that belief because (i) the coherence of the system does not capture the inferential structure of the set of beliefs but that structure is important to justification; and (ii) coherence will not yield justification even if the background system is entirely true, since the system might either be a set of lucky guesses or purely fictitious ("isolation argument"), see their "Fundamental Troubles with the Coherence Theory" in J. W. Bender (ed.), *The Current State of The Coherence Theory*.

with the whole system. A coherentist analysis of knowledges, grounded as it is on a *petitio principii*, is as normative as its first principles, which, by hypothesis, have been accepted on an unjustified basis. Against this radical version of the sceptical argument, the coherentist appears to have no real defence. He can only reply by stating what he has already said, that this is how things are. He could appeal to his criteria—"coherent beliefs are knowledge", "systematic beliefs are knowledge", "logically structured beliefs are knowledge" and the like—but in so doing he admits what was already made clear by Chisholm: in the end one must start with some assumption, either about the extension or about the criteria.

4. *From the Encyclopaedia to its Genesis*

Chisholm's foundationalist proposal of begging the question appears to be unsatisfactory because it represents too strong a solution. At first sight, the coherentist alternative seemed slightly more promising, but on further investigation it has turned out to be equally ineffective, although for the opposite reason. Unless it is embodied in a form of idealism—scarcely acceptable for reasons seen in the previous chapter—its reply to the sceptical challenge is far too weak. The conclusion to be drawn so far is that it is hard to indicate how a theoretical organisation of knowledge, which tacitly presupposes an interpretation of epistemology as a *philosophy of knowledges*, i. e. as a theory of the system of criteria-&-extension alone, can actually avoid being completely at the mercy of the *diallelus*. Both foundationalism and coherentism are essentially philosophies of knowledges, that is they both tend to disregard the *process* that leads to the creation of the system of knowledge. After their failure, it is legitimate to suspect that their common feature, namely their extensional methodology à la Descartes, is the constraint which frustrates their attempts to overcome the metaepistemological problem. Therefore, a possible indirect manoeuvre would be to uproot precisely this common presupposition, and to concentrate our efforts on the study of the gene-

sis of the encyclopaedia. Historically, such a shift from an extensional to an intentional approach can be compared to the passage from Descartes to Locke.¹³ Theoretically, it represents an ascent to a higher level of self-reflection represented by a genetic approach. Once the possibility of the latter is taken into account, a new analysis of the logic of the sceptical questions we are dealing with is required. This will lead us to an understanding of the limits of psychologicistic and cognitive strategies in general. After that, we shall be able to move on to a transcendental approach by considering the transformation undergone by the logic of our possible answers in the course of the shift from one conception of the theory of knowledge to the other. Historically, we shall move from Locke to Kant. Theoretically, we shall attain the highest level of abstraction from which the meta-epistemological problem can be successfully addressed.

5. *Two Sceptical Questions*

For all the reasons listed above, we may adopt a weakly coherentist model as the best initial hypothesis about the internal structure of the reconstruction of the encyclopaedia. Let us suppose that, by employing a foundationalist conception of the justificatory relation between members of the same class and a coherentist one of the relation between classes, we have worked on an initial set of *prima facie* knowledges and hence elaborated a theory which provides a way to select what could count as members of the finite, global encyclopaedia of human knowledges Σ .¹⁴ At the end of the process, the

¹³ I believe it to be appropriate that coherentism and foundationalism should share the same metatheoretical presupposition of an identity between epistemology and theory of knowledges for, as I have indicated in chapter four, American epistemology may owe its extensionalist background to its Cartesian origin.

¹⁴ Two authors who support a strict interaction between extension and criteria, though in different terms, are Haack, in *Evidence and Inquiry*, and Cornman in "Foundational versus Non-Foundational Theories of Empirical

epistemological reconstruction distinguishes itself from its object only as a more selective, reflected and structured system. At this point, we know that the sceptical criticism gradually undoes the coherent complex of extension and criteria of knowledges by challenging every phase through which the weakly coherentist reconstruction of the system has been achieved. Not only does the sceptic provide a test of the system of knowledges, investigating whether it is really as coherently virtuous as the theory claims it to be; he also endeavours to reveal that the closed sphere of the epistemological reconstruction of the encyclopaedia can be rejected as thoroughly ungrounded. The resulting paradox is that, while we are supposed to show that our criteria cohere with our extension and vice versa, in so doing we also run the risk of being accused of empty circularity. For the sake of simplicity, let us suppose that, by disputing with the sceptic, we have reached the crucial difficulty which challenges the entire system. Every bit of the extension of Σ has been bracketed and we are left with the last question:

Q) What justifies (the weakly coherentist reconstruction of) Σ ?

We have seen how tempting it may be to reply by resorting to some component of the system, either at the level of its epistemic contents or at the level of its epistemological structure. We have also realised that such a circular answer is all our coherentist can provide, but that it is either insufficient or metaphysically too aggressive in the case of an idealist position. The problem persists, however, that unless we are able to respond to Q in terms of a satisfactory anchoring-answer, one which is not at the same time a *petitio principii*, our weakly coherentist system of extension and criteria will fail to pass the critical test provided by the sceptic. So, are we now inevitably bound to reply to the request for a justification of Σ by presenting either some specific criteria or a determinate extension of knowledges, and hence

Justification", but see also N. Goodman's "The New Riddle of Induction" in N. Goodman, *Fact Fiction and Forecast* (Indianapolis, New York.: Bobbs-Merrill, 1973, first published 1955), pp. 59-83.

fated to be caught on the wheel? No. The first step towards avoiding this trap consists in the recognition of the twofold nature of Q.

Bearing in mind that the sceptic is exploiting the constraint represented by the equation "epistemology = epistemology of knowledges", from which we ourselves started our investigation, and recalling that the sceptical challenge itself has the double task of testing the internal coherence of the system and objecting to its being externally ungrounded, it now becomes possible to recognise that Q needs to be interpreted in two different ways, as meaning not only:

Q₁) What can justify a determinate class of members of Σ ?

But also

Q₂) What can justify the occurrence of Σ as a whole?

According to G. E. Moore:

[...] the question: How do we *know* anything at all? involves three different kinds of questions. [...] the first [M₁] is as to what sort of thing knowledge is—as to what happens when we *know* anything—is a question philosophy shares with psychology. [...] hence there is included the question [M₂] what knowledge is, the question what is meant by saying that any proposition is true. [...] and this question as to what *truth* is has generally been said to be a question for *Logic*, in the widest sense of the term. [...] And, finally, there is still another thing which may be meant, when it is asked: How do you know that? It may be meant, namely, [M₃] what reasons have you got for believing it? [...] [that is] what are all the different sorts of reasons which are good reasons for believing anything."¹⁵

It will take only a moment of reflection to recognise in Moore's first question M₁ a particular interpretation of Q₂ (see Q_{2a} below) and in his third question M₃ our Q₁. Moreover, it is not by chance that clearly Q₁ should be only a particular version of Chisholm's question C—what the criteria of knowledge are, i.e. how we are to decide whether we know—since Q₁ is asking how it is possible to establish that such and such are real instances of knowledge and this is also

¹⁵ G. E. Moore, *Some Main Problems of Philosophy* (London: Allen and Unwin, 1953) quotation from pp. 25, 26.

the way Chisholm interprets Q. Since $C = Q_1 = M_3$ are all metaquestions concerning the knowledge of knowledge, none of their answers may ground the system. Any attempt to solve $C = Q_1 = M_3$ is the consequence of a direct strategy and therefore is bound to lead to the *diallelus*.

Q_2 is a previous-question. It asks how it is that a certain extension of candidates to the title of knowledge comes to be produced. Reflection on this new question helps to trace the origin of our problem one step further back to its roots, and hence enhance the possibility of coming to adopt a transcendental approach. It must be admitted that we still have to deal with the justificatory issue, but by means of Q_2 we can now start working on an antecedent stage and wonder how we entered into the moderately-coherentist reconstruction of the system of knowledges at all (though, depending on the point of view, Q_2 and its proper answer may also represent a way out of the *diallelus*).

The question whether the metaepistemological problem can now be resolved by providing an anchoring-answer to Q_2 in terms of a theory of the genesis of the whole encyclopaedia reconstructed by the coherentist analysis, requires a further distinction between three senses in which the genesis of knowledges can be investigated. Only one of them will be relevant to our strategy.

6. Three Versions of the Genetic Question

In chapter two, I suggested that an investigation into the ways in which knowledges are produced can concentrate on three different processes, namely the *growing-process*, the *cognitive processes* and the original *genetic process*. An analysis of the first process belongs to the study of the dynamic evolution of the system of knowledges. The extraordinary development of Σ can occur only after the production of some initial extension of knowledge has been achieved. It follows that considerations of the growing-process belong to the historiography and philosophy of science and to the sociology of

knowledge. They would be completely out of place in this context.¹⁶ Turning our attention to the remaining two processes, it will be recalled that the *cognitive* ones consist in the physical and mental activities that make the presence of an epistemic relation between subject and object, mind and being, possible at all. In the third case, by concentrating on the *genetic process* a theory endeavours to explain why such a phenomenon as the human encyclopaedia arises at all. The distinction between the former and the latter kind of process can be more easily recognised if we read Q_2 as a combination of two more specific questions:

Q_{2a}) How is Σ being produced? And

Q_{2b}) Why is there a phenomenon such as Σ at all?

In the passage quoted above, Moore disregards Q_{2b} and simply identifies Q_2 with Q_{2a} i.e. his M_1 ("what happens when we *know* anything [...] is a question philosophy shares with psychology"), but of course there are no reasons why the most radical question about the occurrence of knowledge—which in Moore's terms could be formulated as "*Why* do we *know* anything at all?"—should not be addressed philosophically. To the extent that the question does not refer to the role of education, and hence to the influence that the goal driving the construction of the encyclopaedia can have on the individual mind via pedagogic methods, Moore is right in considering Q_{2a} as a cognitive issue, which probably has to be answered only by a cognitive science. Q_{2a} asks for a scientific description of human capacities to produce all the various perceptual and conceptual elements which concur in the construction of the encyclopaedia. Once we turn to Q_{2b} , however, I suspect Moore did not take into account this version of the question because it involves an ontological dimension. Put

¹⁶ It is worth adding here that a lack of clarity sometimes affects research in this area, so that what goes under the name of sociology of knowledge, instead of including only studies on the dynamics of the encyclopaedia, has occasionally intruded into the social-epistemic construction of reality as well, a topic which is of paramount interest for a theory of the genetic process.

crudely, the problem becomes why there is knowledge and not simply insipience and fatuity in the history of mankind. Q_{2b} now places the metaepistemological problem within the perimeter of a theory of the genesis of the process of knowing, which I shall henceforth call a *gnoseology*.

According to its Greek etymology, *gnoseology* means not only “study of knowledge” but more precisely “study of the process through which knowledge is obtained” i.e. the study of γιγνώσκω. Since we have already employed the term “epistemology” in order to refer to the philosophical discipline that analyses the extension of knowledge as the result of the process of knowing—for the term has, together with the meaning “study of knowledge” also the meaning “study of what is known” i.e. ἐπιστήμη—*gnoseology* can be used in order to refer to the philosophical discipline which addresses question Q_{2b}, first by referring to the existence of a process of knowing, then by investigating the origin of the epistemic relation between mind and being. This is the question that in chapter two I called G₁. The presence and incessant expansion of the system of human knowledges is made possible by the occurrence of the process of knowing. By wondering how there comes to be a genetic process that leads to the production of knowledges, i.e. by asking what the genesis of the process of knowing is,¹⁷ we are asking why there is an

¹⁷ Following J. L. Austin, *Philosophical Papers* (Oxford: Oxford U. P. 1961), chapter 4 “Other Minds”, we can certainly say that “how is it that we have an epistemic relation with external reality?” is not the expression of an every-day common doubt. Nevertheless, within the framework of a theory of knowledge it cannot be disregarded as a mere theoretical curiosity, irrelevant to a proper study of the nature of knowledge. In some cases such as Dewey’s *Instrumentalism*—Dewey’s manifold-faced theory of knowledge can be read as a development of an evolutionary and instrumentalist answer to the question “why does S have something like a cognitive activity?”, see J. Zedler, “Dewey’s Theory of Knowledge” in J. Blewett (ed.), *John Dewey: His Thought and Influence* (Westport, Connecticut: Greenwood Press, 1960)—can even be the most decisive problem from which a theory of knowledge takes its first steps. It is also worth noticing that unfortunately the

endless, human demand for knowledge. This is the same demand that has led us to embark on the investigation of the nature of knowledge. The self-reflective character of the investigation could not be more obvious.

Although cognitive sciences, and in particular cognitive psychology, seem to have at least precedence, if not exclusive rights, in providing a reconstruction of the perceptual and psychological processes that make the genesis of the encyclopaedia possible, I have argued in chapter four that no form of more or less refined cognitivism or psychologism will ever be able to solve the metaepistemological problem. It is purely a matter of logic. A psycho-physical description of how the cognitive processes produce candidates to the role of knowledges does not represent a real departure from the ungrounded circularity of the *diallelus*. If it does not simply incur another kind of *petitio principii*, it collides with Husserl's *erkenntnistheoretische Prinzip* and the corresponding naturalistic fallacy. Thus the attainment of a higher level of self-reflection, in itself, is not yet sufficient to solve the problem of providing the encyclopaedia with a justificatory basis. This is probably what Locke missed, and certainly what many have challenged him over, including Rorty. Since any answer to Q_{2a} fails to provide a successful strategy against the metaepistemological problem, there is no alternative but to turn to the ontological interpretation of Q_2 . Such an improvement in our understanding of the logic of the question—our focusing now on Q_{2b} —requires a similar refinement in our understanding of the logic of the answer, i. e. of the concept of justification.

“genealogical question” is largely disregarded by philosophers of knowledge, as it is at best dismissed in the first lines of the introduction to their works. There, the author will introduce some vague and colloquial remarks about human interest in external reality or about the natural necessity of developing a system of knowledge and the like.

7. *Between Scylla and Charybdis*

A gnoseology clearly finds itself in a rather awkward situation. On the one hand, the theory is confronted by the old problem of distinguishing its indirect approach, i.e. its answer to Q_{2b}, from a direct appeal to some criteria or extension of knowledges, in order to bypass the same difficulties that the foundationalist and the coherentist have been unable to overcome. On the other hand, an appeal to the subject's actual cognitive activities would just be a different sort of error, similar to the Cognitivist's proposal. This is to say that a gnoseology must sail between the Scylla of a more or less explicit, epistemological *petitio principii* and the Charybdis of a *naturalistic fallacy*. In order to escape the former, the theory cannot give a strong *epistemic justification* of the coherent reconstruction of the encyclopaedia based on any combination of extension and criteria. But in order to elude the latter, the theory cannot present an answer consisting merely of a *phenomenal description* of the cognitive processes responsible for the creation of the encyclopaedia either. What the theory must provide is a *supporting explanation* of the weakly coherentist reconstruction of the comprehensive system of knowledges, whose logic is still justificatory, and hence eschews the naturalistic fallacy, but whose contents—the description of which represent the ontological situation that justifies the occurrence of the encyclopaedia—are such that they do not represent a direct appeal to the already established-&-challenged system of knowledges, and therefore can bypass the sceptical objection. In order to understand how all this is possible, and in what sense a supporting explanation avoids the previous problems, it is necessary to take into account the transformation undergone by the notion of justification itself, in the course of the passage from *L1* to the transcendental level of the metaepistemological problem. The modification of Descartes' too strong conception of inferential justification was part of the programme outlined at the end of last chapter. In the following section, I intend to carry out such a revision by establishing, first, that a *supporting*

explanation is a rather ordinary logical concept and then that it is precisely the sort of concept required in order to escape from a sceptical *regressus* of doubts, such as the one exemplified in the *Meditations*, without abandoning the normative approach. The problem of how a supporting explanation may be filled with contents not subject to the sceptical attack of a *petitio principii* will be addressed in §§ 11-13.

8. *Justification: from Validation to Vindication*

In order to elucidate how it is possible to present a justification of *p* by explaining the situation that made *p* happen, it will be useful to start by considering a special case of justification in the pragmatic field, a context in which it is plausible that the very concept of justification has its intuitive origin. Our initial insight will require further refinements later on.

Imagine that John has a date with Mary on Saturday evening. They had a bad argument the day before, so John is really looking forward to meeting his girlfriend in order to restore the old, lovely atmosphere. Unfortunately, they do not live in the same city, so John regularly goes to Mary's place by car. Suppose now that John has lent his car to a very pretty friend of his, Claire, who has promised to return it no later than lunch time. For some reason, however, Claire is late, so John cannot go to Mary's house in time. Knowing that Mary would be jealous of Claire, and in an attempt to avoid further complications, as he arrives John tries to justify himself by saying: "I am really sorry to be late Mary, but there was terrible traffic." What kind of justification is John providing? By referring to the phenomenon of terrible traffic he intends to present a description of the *ratio essendi* of his delay. Terrible traffic does not work here as a mere excuse, since what John wants to present is a description of a feature of the world—a phenomenological report on a particular ontic state—that has made him late and therefore *not responsible at all* for his delay. He is not presenting the description of an event that makes

him *responsible but forgivable*. The terrible traffic he pretends to have encountered on his way to Mary's place is not even a pragmatic justification, in the sense that it is a valid reason for doing what John has done. Terrible traffic is a sufficient *motive*¹⁸ for being late. In other words, the delay is presented as a direct and inevitable consequence of the occurrence of terrible traffic. If something must be blamed for the delay, this is the fact that there was terrible traffic, not John. Likewise, and contrary to what Austin maintains, if A kills B, the fact that the killing was done in battle and therefore was a sort of inevitable event, does not justify A. We can simply assume that nobody is ever justified in or excused for killing someone else in any situation whatsoever. Such a position would be pragmatically too demanding, but not intrinsically inconsistent with human nature, that is, everybody can be supposed to be capable of refraining from killing someone in any circumstances. Hence, on the basis of this principle, a judge could give A all his understanding, and would even be ready to admit that everybody would have done the same in the same situation, but he would not be able to say that A was justified in what A did. On the contrary, his judgement would be that, provided that all the necessary conditions were satisfied, such as the fact that it was a fair killing, really due to the situation and so on, killing in battle is not subject to evaluation by criminal law and hence not prosecutable, not that it is a justified action. The battle is in fact a special case of extenuating circumstance, a case of *force majeure*. It is special because it reaches the limit beyond which A is no longer re-

¹⁸ Clearly here "motive" has nothing to do with "motivation" ("that which "moves" or induces a person to act in a certain way, a desire, fear, other emotion or a consideration of reason which influences or tends to influence a person's volition"), even if the two terms might easily be linked. As it is used here, "motive" must be understood as "that concerned with or having the function or quality of initiating action", "a moving or inciting cause" or "what moves something else", where "to move" can be meant either logically or physically. So a fire can be the motive of my feeling hot, and the *modus ponens* is the motive for a certain symbolic operation.

sponsible for A's actions. It is part of that wide variety of phenomena that may be called phenomena of constrained freedom, or constrained rationality, and which include Descartes' notion of rational freedom, according to which the more I incline toward giving assent to a clear and distinct idea the more free I am, and the apparently deterministic behaviour of people placed in competitive contexts, from market-competition to the prisoner's dilemma, from managerial decisions to agonistic events. Of course, an extenuating circumstance can be more or less extenuating. If we consider the degree of extenuation high enough,¹⁹ then we may accept that killing someone in battle is a case of killing that should not be inserted in the game of justifications at all. To speak of justifications or of excuses has some sense only if the subject is supposed to be really, not just theoretically, free, to a reasonable degree, to do something else. Only if we follow a casual use of the concept can we say that A was justified in killing B, though in this case "justified" would only amount to "not

¹⁹ The following is a possible way of "measuring" when a subject could be excused because something has (not) happened despite him or herself. Let us assume that John is a honest person, who is always believed. Now suppose further that John sets his alarm-clock because he has a very important interview for his first job early the next morning. His chances of marrying Mary depend on getting the job. The alarm-clock does not work and John is believed but not excused by the manager, so he loses his chance and cannot marry Mary. Suppose now that John sets *two* alarm-clocks and they still fail to work. John considers this possibility and since he is very anxious sets *three* alarm-clocks. Despite all his trouble, though, none of them work. This time we may suppose that John is not only believed but also excused by the manager, so that he still has his chance of a job interview in the afternoon and of marrying Mary. *Three* alarm-clocks failing seems to the manager be a strong enough *motive* for not blaming John of laziness. If not three, we could suppose that John could have freed of blame by *n* alarm-clocks not working. "*N*" would be the ideal limit beyond which even the worst manager would not blame anybody for his delay or, using a relaxed meaning of "pragmatic justification", would excuse everybody. In my experience, only in the Army was the number of defective alarm-clocks not taken into consideration.

being prosecutable” for such an action. Returning to our less violent example, terrible traffic is therefore to be interpreted as another instance of good motive. As in the battle above, the occurrence of terrible traffic is the event that is presented by John as having caused his delay and, at the same time, as one that saves him from any application of the exclusive disjunction justified/unjustified. What makes terrible traffic, like the battle, a good genetic explanation of John’s delay, and therefore a good motive for being late, is not that it is a mere description of any possible cause of the delay. Otherwise an answer like “I drove at a speed of 10 miles per hour” would be as good as “terrible traffic”, which it is not. We do not accept the fact that someone takes his time by driving slowly as a good reason for being late, since in this case the slow driver is responsible for being late, either because he might have driven less slowly or because, knowing his travelling speed, he should have decided to leave earlier, in order to be in time. Terrible traffic is a genetic explanation. By presenting a description of how things went, it also provides the reason why things were so determined that the result could not be different and things could not have gone otherwise than they did. Terrible traffic has the fundamental characteristic of being a good motive of delay because it goes beyond John’s capacities for acting differently. More intuitively,²⁰ it does not give Mary the possibility of answering “you should have thought about it before”, whereas the “driving slowly”-reason would only raise the further but similar

²⁰ Eventually, Mary could ask John “Yes, you encountered terrible traffic, but do you realise why you encountered such terrible traffic?” a kind of question which depends on a common form of fatalism. In our case, Mary wants to find a “superior” motive for John’s delay. We can imagine that Mary’s answer to John’s “justification” could be something like: “You would have been late in any case, for our affair is destined to come to an end because of your carelessness. If it hadn’t been the traffic, it would have been something else. Maybe you would have given the car to that Claire of yours, who is always late and makes you late, exactly like now”. This is a reply which despite its absolute lack of rational justification—since by hypothesis Mary believes in what John has said—puts John in a very awkward position.

question "why did you drive so slowly?". The fact that terrible traffic can be accepted by Mary or, more weakly, can be thought by John to be acceptable to Mary, as a valid motive for his delay means that it is a good answer both to the question "how could you arrive so late?" and to the question "why did you arrive so late?".

It is not hard to grasp the logic behind the previous examples. Suppose that a certain set of conditions *p* necessarily produces a result *q*. By "produces" is meant any kind of relation which makes the existence of *q* necessarily dependent on the presence of *p*. The examples show that a *description* of *p* can be *justification-affording* with respect to the occurrence of *q*.²¹ I shall refer to this kind of justification of *q* as to the *supporting explanation* of *q*.²² A supporting explanation justifies *q* on the basis of a description of its *ratio essendi*, i.e. *p*, the condition which causes the occurrence of *q*.

The notion of supporting explanation, just introduced, is precisely what needs to be provided once the transcendental level of the critical reflection has been reached. In the previous pages I have endeavoured to clarify the fact that the sceptical challenge is progressive and methodical. I have also explained how the final collapse of the entire system of knowledges is continuously postponed while the process is in progress, until the moment the system will be forced to refer to some of its own already undermined part, in order to justify itself. What needs to be highlighted now is the qualitative nature of such a progression, a feature of the sceptical strategy we encountered briefly in chapter four. The process of bracketing increasingly wide parts of the encyclopaedia is not merely a linear and repetitive succession of external offensives against different instances of knowl-

²¹ I borrow the expression from J. Post, "Infinite Regress of Justification and of Explanation", *Philosophical Studies* 38 (1980), pp. 31-52, cf. pp. 40-41.

²² For a revaluation of the connection between justification and explanation of epistemic statements see K. Lehrer "Justification, Explanation and Induction", in M. Swain (ed.), *Induction, Acceptance and Probability* (Dordrecht: Reidel, 1970), pp. 100-133.

edge, but an internal process that intensifies progressively. This is not surprising. We know that doubting each single instance of possible knowledge would be an endless process. The sceptical procedure must follow a qualitative path and so put in question whole *classes* of types of knowledges according to their degree of certainty, if it wants to take a finite time. The process, therefore, ends up by establishing an escalation. The wider the extent of knowledges already challenged becomes, the stronger the resistance shown by the remaining parts of the system is supposed to be. Correspondingly, in the course dismantling the system of knowledges, the arguments employed by the sceptic must also acquire an increasingly stringent character. Although this aspect of the sceptical dialectic is often obscured by a purely logical and extensionalist approach, it is described very clearly both by the sceptical and by the dogmatic party. In the *Outlines of Pyrrhonism*, Sextus Empiricus celebrates the gradual nature of the sceptical *tropi*. We know that he actually considered the *diallelus* the most radical of all the dialectical weapons at his disposal. On the dogmatic front, we can witness the devastating effects of the sceptical arsenal in Descartes' *First Meditation*. Descartes is a master in presenting the sceptical *crescendo* and the gradual process by which his certainties come to be shaken by the methodological doubt. When the final stage is reached, even mathematics, the domain of what is logically im/possible, is challenged by an argument which shares equivalent, though opposite, convincing power, that is by the non-contradictoriness of the hypothesis of the omnipotent and deceitful demon.

9. *Feedback vs. Escalation*

It is important to recognise that the *sceptical escalation* represents the negative version of the feedback process, which we saw to be at the origin of the coherentist reconstruction of the encyclopaedia. Both are interactive processes built on loops occurring between the initial input and the final output of the same process. In a feedback,

the gradual and circular return of the output to the input is *inwards* and *centripetal*. Although some natural feedbacks can provoke instability, when they are purposefully employed their aim is to modify and then stabilise the entire cycle on the basis of *pre-determined* parameters. The final effect is therefore the self-regulation of the process in question, as is the case in the coherentist reconstruction of the encyclopaedia. In an escalation, the same kind of loop is disruptive. The return has an *outwards* and *centrifugal* direction, and gradually degenerates into a progressive increment or amplification of one or more of the qualitative or quantitative features of the cycle, until either the process exhausts itself or the entire system crosses a threshold of breakdown or of transformation. This description applies, for example, to the way one plays roulette if one decides to double the stake after any loss. The process ends either because eventually one wins (transformation of the system) or more often because one runs out of money (gradual decay of the process). The same phenomenon has been studied in the politics of armaments and in physics, in relation to nuclear fission. Still, the same description applies to the sceptical process. In this case, the escalation of the *regressus* leads to the final problem of the *diallelus*, i.e. to the *circulus in probando* in which the *justificans* ends by having as much probative force as the *justificandum*, which has been already epistemologically devalued by the sceptical doubt. The request for a justification, advanced once we are within the *diallelus*, has the effect of causing the entire system to cross the threshold of transformation which is represented by the difference between the purely inferential notion of justification and the notion of supporting explanation. The progressive amplification of doubt leads to the transformation of the system, which escalates from one to another type of supporting relation.

The necessity of such a passage has been recognised since Aristotle, but to my knowledge it was made sufficiently explicit and precise for the first time by Herbert Feigl, by means of the distinction between *validation* and *vindication*, that is between *justificatio*

*cognitionis and justificatio actionis.*²³

Although Feigl limited his analysis to the problem of the foundation of logic, he rightly understood the *regressus* and then the *circulus* as the processes which lead to the final passage from the notion of justification to the notion of supporting explanation. His intuition was that a way of moving out of the dialectic of justifications is by providing an explanation of why things have come to be the way they are. This feature, which resembles the transcendental study of the conditions that make both scepticism and dogmatism possible, is also shared by two works as different as *On Certainty* and the *Metaphysics*. In Wittgenstein, validation and vindication are linked through the analysis of the semantic conditions that make doubting a significant procedure and the word "knowledge" a usable part of our epistemic vocabulary. As for Aristotle, it is true that in the *Metaphysics* he suggested that, once the threshold of mere repetition was reached, it was time to call a halt to the process of justifying the premises. Certainly, he considered

a sign of lack of education not to know of what we should require proof and of what we should not.²⁴

²³ Cf. H. Feigl "De Principiis non disputandum ...? On the Meaning and Limits of Justification", first published in M. Black (ed.), *Philosophical Analysis* (Ithaca-New York: Cornell University Press, 1950), pp. 119-156 and then reprinted in H. Feigl, *Inquiries and Provocations—Selected Writings 1929-1974*, edited by R. S. Cohen (Dordrecht: Reidel, 1981) Chap. 14. A shorter version of the same paper, entitled "Validation and Vindication: An Analysis of the Nature and the Limits of Ethical Arguments" was published in W. Sellars and J. Hospers (eds.), *Readings in Ethical Theory* (New York: Appleton-Century-Crofts, 1952), pp. 667-680 and is also reprinted in *Inquiries and Provocations* as Chap. 21. Feigl distinguishes between the logical *validation* of specific instances of knowledge and the pragmatic *vindication* of the principles on whose basis the *validation* can be performed. The essay has a neopositivist orientation and is to be placed within the classic debate on the foundation of logical principles, and hence in the Aristotelian tradition, as the title of the longer paper well indicates.

But the apparent simplicity of such an idea contains a deeper lesson. In the *Metaphysics* the first principles of logic must be accepted not merely because *contra negantes principia non est disputandum*, but because identity and non-contradiction are considered the laws which allow any further determination of thought.

The starting-point for all such arguments is not the demand that our opponent shall say that something either is or is not (for this one might perhaps take to be assuming what is at issue), but that he shall say something which is significant both for himself and for another; for this is necessary, if he really is to say anything. For, if he means nothing, such a man will not be capable of reasoning, either with himself or with another. But, if anyone grants this, demonstration will be possible; for we shall already have something definite.²⁵

Any possible investigation must accept being framed within these principles. According to Aristotle, the necessity of formulating and communicating well formed thoughts vindicates the occurrence of the first principles of logic. The use of logic turns out to be motivated ultimately by pragmatic reasons.²⁶

10. Two Final Problems

The sceptical escalation transforms the nature of the epistemological reflection. Methodologically, we have departed from a purely extensional perspective and reached a genealogical approach. Logically,

²⁴ Aristotle, *Metaphysics*, with an Eng. tr. by H. Tredennick (Cambridge Mass.: Harvard U. P., 1947), IV, 4, 1006^a 7-8.

²⁵ *The Complete Works of Aristotle*, the revised Oxford translation, ed. by J. Barnes (Princeton, N. J.: Princeton U. P., 1984), *Metaphysics* 1006^a 20-25.

²⁶ See on this point H. Dingler, *Philosophie der Logik und Arithmetik* (München: Reinhardt, 1931), pp. 19-23. Dingler accepts "man's last active principle" ("das letzte Aktive in uns") as the last justification of the logical principles and their use, cf. K. H. Krampitz "Das Begründungsproblem in der Logik", *Deutsche Zeitschrift für Philosophie* 26 (1978), pp. 387-392. The similarity with Feigl's position is remarkable.

we have ascended from a requirement for a validation of instances of knowledge—which can be satisfied by pointing to foundationalist and/or coherentist relations internal to the system of knowledges but which remain insufficient, by themselves, to stand the charge of mere circularity—to the request for a supporting explanation which, by describing the genesis of the process of knowing, can at the same time vindicate the occurrence of the encyclopaedia. Following the transition from the inner validation of the system to the further vindication of its genesis, our original question Q_{2b} —why is there such a phenomenon as Σ at all?—can now be correctly interpreted as consisting of two separate problems:

- Q_{3a}) Can the *existence* of the encyclopaedia be *vindicated*?
- Q_{3b}) Can the *nature* of the encyclopaedia be *vindicated* in a way that still leaves room for its critical evaluation?

That we have not incurred any conceptual shift in the process of reaching the threshold of modification of our conceptual scheme is proved by the fact that at this point the sceptic can still restate his objections in full. According to him, we cannot answer (Q_{3a}) without begging the question—that is, without merely assuming an arbitrary description of a particular *ratio essendi* of the genesis of the encyclopaedia—and we cannot answer (Q_{3b}) without running into the naturalistic fallacy, that is without providing a mere description of the way in which the encyclopaedia has been constructed, which would allow us no way of critically assessing the value of the encyclopaedia itself, and hence no way of modifying it subsequently. Moreover, the very fact that the sceptic is still able to place his questions on the same plane as our epistemological position shows that we have not yet attained the ultimate level of self-reflection indispensable for the success of our investigation. The sceptical challenge has not yet been overcome and subjugated to the principles of our epistemological inquiry. So let us return to our previous example of a pragmatic *ratio essendi* to ascertain whether our indirect approach can finally meet the challenge.

11. *On the Logic of Production*

The example of John's delay being caused by terrible traffic was a suitable case to examine at the outset because of its elementary nature. By definition it implied only one condition, namely the relation between terrible traffic and the ensuing delay. In many other cases, however, the production of something, say a commodity, requires to be studied with respect to at least three essential aspects, namely:

- the *sufficient condition* that prompts the production of the commodity
- the *necessary condition* without which the production of the commodity would not be possible, and
- the *optimising relation* between the sufficient and the necessary condition.

The first condition corresponds to the *demand* for a particular commodity. It is what I have called above the *ratio essendi* of the appearance of the object or the phenomenon under examination. The second condition corresponds to, for example, the technology, the methods, the means—in a word the *instruments*—with which the production of the commodity is carried out, together with the *resources* available for the production of the same commodity. Instruments-&-resources are, logically speaking, what Leibniz called the *requisitum* of the production.²⁷ The *optimising relation* between the sufficient and the necessary condition corresponds to the particular phenomenon whereby a specific demand operates upon both instruments and resources in order to generate a *satisfactory product*. Thus, the occurrence of a product depends upon the existence of a

²⁷ "Leibniz defines a sufficient reason as 'that on the assumption of which a thing exists' and distinguishes it from a 'requisite' (*requisitum*) which is 'that without the assumption of which a thing does not exist'. In other words the former is a sufficient condition, the latter is a *sine qua non* or necessary condition", G. H. R. Parkinson, *Logic and Reality in Leibniz's Metaphysics* (Oxford: Clarendon Press, 1965), p. 63, who refers to R. Zocher *Leibniz' Erkenntnislehre* (Berlin 1952), p. 267.

demand for it, while the possibility of a critical evaluation and hence a modification of the product itself depends upon the optimising relation between the *ratio essendi* and the *requisitum*, i.e. upon the possibility of

- a recognition of a gap between the actual nature of the product and the specifications established by the demand; and
- a modification, guided by the demand, of both instruments and/or resources, which aims at improving the product in order to make it meet the specifications established by the demand.

The former point is trivial and can be disregarded. The latter, on the contrary, is crucial, for it specifies that the *ratio essendi* of a product can elicit an evaluation of that product if and only if it is also a *causa finalis* of it. This represents a major difference between the example of John's delay being caused by terrible traffic and the production of a particular commodity. In the former case, the genetic process plays the exclusive role of efficient cause, and the nature of the relation between the two events implies a mere suspension of the justificatory logic. In the latter case, the supporting explanation also has a *teleological* facet, which makes it possible to assess whether and, if so, to what extent a determinate product, called forth by a particular demand, truly satisfies the latter. Suppose, for example, that the demand was for an instrument by means of which time could be measured with reasonable precision. The *requisitum* could be the mechanical technology available at the time, say during the seventeenth century, together with the relevant material and intellectual resources. The product would be a determinate type of clock. The implementation of the optimising relation would then consist in this: insofar as the demand does not decrease it would also tend to bring about modifications in the *requisitum* in view of an improvement in the product required, e.g. by promoting research into new materials, or a refinement in the way they are handled, or perhaps the invention of a different technique, and this would hold true as long as the demand was not fully satisfied. The logic of demand and production is necessarily finalistic and based on a feedback relation.

The distinction between the *ratio essendi/causa finalis*, the *requisitum* and the *optimising relation* between the former and the latter applies to many types of productive processes, including the one which brings about the system of knowledges. As in the production of commodities, the encyclopaedia is obtained because there is a *requisitum*, in this case the various epistemic processes and a reality subject to them, and a demand for knowledge which prompts and regulates its production. The vindication of the *existence* of the encyclopaedia depends upon the possibility of a non-fallacious interpretation of the demand for knowledge as the *ratio essendi* of its genesis. However, the critical vindication of the *nature* of the encyclopaedia depends upon the possibility of a non-fallacious interpretation of the optimising, teleological relation between the demand for knowledge, seen now as its *causa finalis*, and the *requisitum* of its genesis. These possibilities are analysed in the following three sections.

12. The Possibility of a Sound Vindication of the Existence of the Encyclopaedia

We have already come across the ordinary interpretation of the demand for knowledge. This is usually described in terms of a spontaneous and insatiable desire for knowledge, the German *Wissbegier*, rather than mere curiosity, the German *Neugier*. Traditionally, the sceptic and the dogmatist agree in considering the mind's endless and spontaneous desire for knowledge as the *ratio essendi*, or sufficient reason, for the occurrence of the epistemic relation with reality which then leads to the creation of the encyclopaedia. This fundamental assumption represents the anthropological cliché that encourages recognition of the "common ground" represented by the phenomenon of human knowledge, which is shared by the sceptic and the dogmatist, as we saw at the beginning of chapter four. There are very good reasons to believe, however, that the desire to know is thoroughly inappropriate as a vindication of the existence of Σ .

According to the dogmatist, the desire to know is a functional aspect proper to intellectual activity itself. As such, it is as fulfillable as is any other basic, common, natural and instinctive desire instilled by nature into man's mind and body. By stressing the functional nature of the epistemic *conatus*, "dogmatic" philosophers have often attempted to use the demand for knowledge to vindicate the nature of the encyclopaedia, and not solely its existence. From Plato to Aristotle, from Descartes to Hume, the simple inference from the naturalness of the desire, and thus the demand for knowledge, to the knowability of nature has been commonly, though often implicitly, used in order to prove that the mind is fated to develop a detailed, reliable and adequate description of the world. In more Kantian terms (though not in Kant's philosophy), the dogmatic party has often assumed that the presence of the desire for knowledge at the ontological level, i.e. the very fact that nature makes man eager to know, warrants a priori and in principle the success of the cognitive enterprise at the epistemological level by requiring, again at the ontological level, the total intelligibility of the universe. We do not need to dwell on the historical metamorphoses of the metaphysical argument *ex communi omnium sciendi desiderio* to grasp its full weakness.²⁸ Quite clearly, the argument presupposes first, that the demand for knowledge follows, rather than makes possible, the presence of a fully developed mental life and, secondly, that there is a harmonious relationship between the natural function of man's intellectual capacities and a completely intelligible world. Such a picture is far from being uncontroversial and contrasts with the possibility, stated as a fact by Montaigne for example, that there is no intimate com-

²⁸ I have analysed the argument in "Cupiditas Veri Videndi: Pierre De Villemandy's Dogmatic vs. Cicero's Sceptical Interpretation of 'Man's Desire to Know'", *British Journal for the History of Philosophy* 3 (1995), pp. 29-56.

munication between mind and being.²⁹ Precisely because the argument relies on a strongly *intellectualist*³⁰ and often religious interpretation of reality—one might think of the role played by God in Descartes' *Meditations*, for example—it is in need of a justification, but no support can be provided for the argument by appealing to the encyclopaedia itself, if the entire reasoning is to escape the fallacy of *petitio principii*. Thus, Sextus Empiricus was already able to argue against the Stoics that any similar picture of an harmonious universe was bound to be the result of man's knowledge of the world, and therefore that the dogmatist could not argue in favour of the validity of knowledge on this basis, without begging the question. As he wrote, one could object that "nature made the senses commensurate with the objects of sense" but the sceptic can always reply "what kind of nature?" and how can we be certain about such a fundamental fact?³¹ What looks like internal consistency within the dogmatist representation of the world—natural desire to know and intelligibility of nature *conveniuntur*—is a mere *petitio principii* for a Pyrrhonian like Sextus Empiricus. Hume was the first to bring out this difficulty in all its necessary clarity. If Descartes could still presuppose the naturalness of knowledge and hence reach epistemologically optimistic conclusions, Hume, by adopting a more economic hypothesis about the unnaturalness of a radical doubt, was able to

²⁹ See M. de Montaigne, *An Apology for Raymond Sebond*, translated and edited with an introduction and notes by M. A. Screech (London: Penguin, 1987).

³⁰ We may employ the negative label of intellectualism to refer to such a position, even if it is often used in the literature to describe the tendency to attribute to the knowing subject a complete and explicit knowledge of possible epistemic criteria proposed by a particular epistemology. The problem is that very often intellectualist positions are such only in connection with an ideal human knowing subject S, not with a historical human being, see for example Bonjour *The Structure of Empirical Knowledge*. It is in the former sense that J. L. Pollock accuses Goldman of intellectualism in his *Theories of Knowledge* (London: Hutchinson, 1987), p. 127.

³¹ Sextus Empiricus, *Outlines of Pyrrhonism*, I, 98-99.

maintain, at most, that the sceptic cannot live his scepticism.³² With Hume, epistemology shifts from “nature justifies us in believing that p” to “nature makes it impossible for us not to believe that p”. Man is a “dogmatic” being. Whether the picture of the world resulting from such dogmatism has some correspondence to the actual state of the universe is then a question which should probably be answered in the negative, but which, above all, starts losing interest as a well-formulated issue. After Hume, philosophers realise that the metaepistemological problem cannot be solved by assuming that the universe has been constructed for the sake of man’s knowledge. Thus, in the *Critique* Kant thought he could still rely on the traditional explanation of why there is knowledge at all. He accepted the anthropological description of man as a knowledge-seeking animal, but he had to modify it in methodological terms. The spontaneous, indefatigable and irresistible desire for knowledge, which drives man to attempt to overstep his intellectual limits, was reinterpreted in such a way as to acquire only a *regulative function*. The concrete outcome of this tendency, the ideas of reason, might now at most guide the search for knowledge, but they did not and could not warrant the success of its overambitious metaphysical investigations.

The sceptic has always agreed with the dogmatist in describing man as moved by a free passion for knowledge for its own sake. Even Hume was not sufficiently radical to challenge this tenet. The difference between the two attitudes lies in the *interpretation* of this intellectualist desire and the consequences to be drawn from it. According to the sceptic, man aims at the attainment of knowledge in the same intentional way as, for example, he may aim at the attainment of social prestige. Anthropologically, man is recognised by the sceptic to be a knowledge-seeker, but from an epistemological point of view the sceptic qualifies the intentional “desire to know” as a superfluous and artificial attitude, a source of fruitless efforts,

³² D. Hume, *Dialogues Concerning Natural Religion*, a new edition ed. and int. by S. Tweyman (London: Routledge, 1991), p. 99.

something man could and would well do without. One might recollect that in Christian, anti-intellectualist philosophy the desire for knowledge has often been associated with the sin of mere curiosity and interpreted as the final upshot of the detrimental search for an unobtainable omniscience, showing only the religiously deplorable pride of man.

There is a sense in which the sceptic is right: throughout the history of philosophy the dogmatic interpretation of the demand for knowledge has been thought to be stronger than it really is, and to be capable of proving far too much. The mere suggestion that there is something like an intentional epistemic *conatus* is not and cannot be sufficient to vindicate the creation of the encyclopaedia. On the other hand, in our journey backwards through the various assumptions at the different levels of the epistemological investigation, we have finally reached the point where the sceptic himself is forced to admit his own fundamental postulate. Any radical form of scepticism still presupposes the dogmatic assumption of a spontaneous desire for knowledge (one should keep in mind what Paul Woodruff said about scepticism coming second in historical order), the radical difference being that, according to the sceptic, the production of the encyclopaedia is motivated by an *unnecessary* desire for knowledge and therefore remains thoroughly questionable. Under the influence of the Greek intellectualist legacy, neither the sceptic nor the dogmatist realise the need to eliminate their common interpretation of the desire for knowledge in terms of a direct, uncaused, natural tension of the mind. As long as the demand for knowledge is interpreted in terms of pure passion for knowledge, the latter can always be considered a futile disposition of the mind to attain the superfluous and artificial status of erudition, and no sound vindication can be provided of the presence of Σ . The sufficient condition for the production of the encyclopaedia remains based on an entirely ephemeral exigency. But then the uprooting of such an occult *vis cognitiva* is precisely the final step we need to take in order to render a vindication of the existence of Σ possible.

Eliminating the sceptical intellectualist interpretation of the demand for knowledge has two important consequences. First, we have finally reached the most radical perspective possible with respect to the genesis of the encyclopaedia. The sceptical challenge is now shown to be part of a particular interpretation of the origin of the system of knowledges and the negation of its most basic anthropological assumption opens up the possibility of reducing sceptical questioning to the role of a specific stage in our investigation, thus transforming it into the famous ladder to be thrown away at the end of the inquiry. Secondly, a re-interpretation of the demand for knowledge, since it is going to be based only on the denial of the intellectualist position shared by the sceptic himself, is sufficiently indirect to avoid the sceptical charge of *petitio principii*. For we are not assuming an ontological position that may appear as more or less arbitrary to the sceptic. We are using the sceptical method itself to get rid of the last presumption in the vindication of the genesis of the system of knowledges, one of the most entrenched and yet thoroughly unjustified tenets in the history of thought, namely the conception of man as a knowledge-seeker animal, the very opinion carelessly shared by the sceptic himself in spite of his scepticism. The logic of supporting explanation assures us that our description of the demand for knowledge—whatever this is going to be—can work as a justificatory vindication of the presence of the system of knowledges. And the fact that we approach the description of the demand for knowledge with the denial of an excessively intellectualist premise, which is erroneously shared by the sceptic himself, shows that our negative tenet is not begging the question. This is just another way of saying that, once our sceptical inquiry becomes completely critical via the methodical doubt, we must also give up the intellectualist interpretation of the demand for knowledge that is covertly embedded in it. Critical departure from the latter opens the way to a vindication of the encyclopaedia since, by employing the same process of doubt, we have finally been able to exchange positions with the sceptic, who must still recognise the need for an explanation of

the presence of the system of knowledges, as before, but can no longer attribute it to the vain and ephemeral phenomenon of “epistemophilia”, which can easily be forsaken. The indirect nature of the gnoseological strategy thus results from its negation of a form of intellectualism that must be conceded as consequential by the sceptical challenge itself. The negation puts pressure on the sceptic to come up with an explanation. *Agenti incumbit probatio*, the burden of proof is always on one who takes a positive step in argumentation or reasoning, but it is now the sceptic’s turn to move, and by means of such a conceptual *Zugzwang*³³ we finally subordinate the sceptical questioning to a higher theoretical framework, which is now even clearer of presupposition than scepticism itself. Our negative anthropology forces the sceptical reflection to look for a more acceptable rationalisation of the occurrence of knowledge.

I shall return to this whole issue in the next chapter, when a more detailed description of gnoseology as a non-fallacious and anti-sceptical study of the genesis of the encyclopaedia will be in order. But first, we need to consider to the possibility of an anti-intellectualist interpretation of the demand for knowledge.

12.1. The Demand for Knowledge: from Desire to Defence

It would be easy to characterise the demand for knowledge as the sufficient reason for the occurrence of Σ in several ways. Providing the demand for knowledge with a specific content, however, not only lies beyond the remit of the present research—where I wish to establish only whether there are sufficient conditions to make such an apagogic approach a promising strategy against the *diallelus*—but it would also be premature with respect to the logical analysis of its nature.³⁴ For a vindication of the existence of Σ is possible if and

³³ A move in chess whereby one forces the other player into a position in which he is obliged to move but cannot do so without disadvantage.

³⁴ I have provided an initial development of a theory of the demand for knowledge in “Scepticism and the Search for Knowledge: a Peirceish An-

only if this demand is interpreted both as *primary* in itself and as *compelled* by the environment within which its bearer lives, and this is precisely what still needs to be clarified in the present context.

A demand is *primary* if and only if its satisfaction is a *conditio sine qua non* for the existence of its bearer. Of course, not every productive process is demand-driven, let alone primary-demand-driven. There are many products whose aim is to arouse new subsidiary demands, and most of our ordinary demands are ephemeral. A child's demand for an electronic game may be sufficient for his mother to work for it, but his existence does not depend upon the availability of such a product, and the demand does not necessitate the supply either. A child's demand for food, on the other hand, has a primary nature. If it is not satisfied for some time the life of the source of the demand is at risk; the child can die. Food, though not tasty food, is an indispensable condition for the existence of the bearer of the demand, and an explanation of the demand vindicates human efforts to provide the body with some nourishment (genetic approach) or simply the presence of food in the fridge (extensionalist approach).

A demand is *compelled*, as opposed to being thoroughly *spontaneous*, if it is imposed upon its bearer by the external environment. For example, a demand for special buildings is compelled by an environment in which earthquakes are frequent. If the environment were different no such demand would arise. Conversely, the way in which buildings are constructed within a given environment is due to the fact that such and such natural phenomena happen to occur in that environment.

A demand is both primary and compelled when the existence of its bearer depends on the possibility of satisfying it, but its origin does not lie only in the natural constitution of the bearer itself, but also in the nature of its environment and in the relation between the former and the latter. For example, the demand for a particular

swer to a Kantian Doubt", *Transactions of the C. S. Peirce Society* 30 (1994), pp. 543-573.

medicine to treat the poisonous bite of a snake must be satisfied if the person bitten is to survive, but its original occurrence is due not only to the nature of the person (as in the case of the constitutional demand for food) but also to the nature of the environment in which the latter lives, and the particular relation the person has with that environment. If the person had not been careless in his/her walking, or if the person had taken medicine before, or if there had been no snakes, no such medicine would have been in demand.

The demand for knowledge is primary if and only if the occurrence of Σ is considered necessary in order for its bearer, that is the mind, to subsist, flourish and hence develop investigations such as that carried out by Sextus in his *Outlines of Pyrrhonism*, that by Descartes in the *Meditations*, or indeed even the present one. But it is not to be misunderstood as a purely *spontaneous* primary demand, due only to the nature of the mind, for otherwise we have still not explained why the encyclopaedia is a human construction arising from of a relation with reality. Only if it is correctly interpreted as the result of a *reaction* of the *proto-mind* (i.e. whatever the mind is before becoming itself, perhaps just a peculiar state or disposition of the brain) to the environment in which it finds itself, can the demand for knowledge explain the nature of the encyclopaedia as the outcome of a relation with external reality, which the mind feels to be utterly, overwhelmingly different from, and extraneous to, itself. Once the intellectualist interpretation of the demand for knowledge has been exposed, the existence of the encyclopaedia can be vindicated by realising that the demand for knowledge is not a mere *expression* of mental life, possibly *ephemeral*, that supervenes *after* the mind is developed, but a requirement whose satisfiability is a *conditio sine qua non* for the evolution of mental life, and which is due to the combination of the nature of the mind, the nature of its environment and the relation between the two. A form of Greek intellectualism—in a way very similar to that which postulated that language is the mere expression of thoughts already well formed in the mind—must be abandoned if the *diallelus* is to be solved. But then we must

take seriously two old metaphors. First, there is the equation between “physical hunger: food” and “intellectual curiosity: knowledge”, already suggested by Plato³⁵ and echoed by Descartes at the beginning of the *Search for Truth by means of the Natural Light*.³⁶ Unfortunately, this metaphor has never been disentangled from the problem of the vindication of the *nature* of knowledge, nor developed in its full consequences. Second, there is, the comparison of the encyclopaedia to a building of knowledge, a construction required by the mind as its own habitat, in which it can shelter while living in the hostile environment represented by reality.

To summarise, the metaepistemological problem of the foundation of knowledge leads to a reconstruction of the encyclopaedia, whose genesis requires a vindication. The vindication of the genesis of the encyclopaedia can be provided by an interpretation of the demand for knowledge which, in order to avoid resorting to any element of the encyclopaedia already challenged by the sceptical reflection, needs to refer to whatever conceptual space is still occupied by the sceptical reflection itself. Thus the indirect manoeuvre consists in eliminating—i.e. putting under the pressure of sceptical doubt—even the limited extension of knowledge covertly presupposed by the sceptical challenge, and represented by the anthropological assumption that the demand for knowledge is in fact due to a mere desire for knowledge for its own sake, a demand that the sceptic then interprets, to his own advantage, as ephemeral and superfluous. The eradication of the intellectualist interpretation of the desire for knowledge finally clears the ground of all assumptions, leaving us, now that the sceptical challenge has been shown to be just a component of the process of investigation, to seek the most economical interpretation of the demand for knowledge such that, being in itself sufficiently sceptical i.e. anti-intellectualist, satisfies a re-

³⁵ See for example Plato, *Phaedrus* 247-8.

³⁶ See *The Philosophical Writings of Descartes*, Eng. ed. by J. Cottingham, R. Stoothoff and D. Murdoch (Cambridge: Cambridge U. P., 1984) vol. II, pp. 400-20.

quirement recognised by the sceptical reflection itself, namely the need for an explanation of the occurrence of a phenomenon such as the search for knowledge and the construction of the encyclopaedia. The analysis of the demand for knowledge as primary and “compulsory” has provided the approach that now makes a sound vindication of the construction of the encyclopaedia attainable. The occurrence of the encyclopaedia can in principle be vindicated (explained-supported) by interpreting its genesis as being required by a demand for knowledge whose bearer—i.e. the mind responsible for the production, improvement and study of the encyclopaedia—can persist and flourish exclusively on the basis of the occurrence of the encyclopaedia itself. The problem of the relation of the moderately-coherentist reconstruction of the system of knowledges with an external reference is approached not in terms of isomorphism (Aristotelian-scholastic epistemology) or representative correspondence (Post-Cartesian epistemology), but in terms of a reaction. How is the reaction of the proto-mind embedded in the demand for knowledge going to affect the nature of the encyclopaedia? In so far as the question is relevant to the present investigation, it can be answered by equating it to a request for a vindication of the *nature* of the contents of the encyclopaedia.

13. The Possibility of a Sound Vindication of the Nature of the Encyclopaedia

In the last chapter, I argued that no investigation concerning the *requisitum* alone can ever provide a non-fallacious justification of the nature of the encyclopaedia. Question Q_{3a} , however, does not necessarily have to be answered by a cognitive science, for it can also be dealt with by taking into account the *relation* between the *requisitum* and the demand for knowledge. Given a specific primary demand D , it is possible to prove that P_1 and not P_2 is the product that satisfies D , within the limits settled by the *requisitum* R , if P_1 and not P_2 comes closer to meeting the requirements established by

D. In other words, the occurrence of D vindicates the occurrence of P_1 and P_2 , while the nature of D makes it possible to evaluate the more or less satisfactory nature of both. The same holds true for a theory of knowledge. The primary demand for knowledge regulates and directs the interaction between the *cognitive* and the *ontic requisita* in order to give rise to a system of knowledges that satisfies increasingly well, if not as well as possible, whatever principles a theory recognises to be entrenched in the primary demand. All this is as a general rule. In greater detail, the interaction among *requisita*, engendered by the demand, is stabilised by the social process of *education* and modified by the individual process of *research*. By education I mean here, rather generally, the complex process of experiencing, training and learning which is involved, for example, in a musician's or a painter's expertise, or in the ordinary recognition that a particular object or feature is missing—an experience impossible for anyone with no previous knowledge of the object or the feature—or again in the perception of an object as a particular object, e.g. a screen as a TV screen or a Computer screen, or in our inability to believe that we live on a flat earth. Education is of a conservative character by its very nature, for it is based on the established encyclopaedia. It usually teaches young minds to look at things in the way old minds thought useful. Sometimes it can inspire young minds to keep themselves open to new but as yet unforeseen ways of looking at things. Much more rarely can it impart thoroughly new perspectives. Education can, then, be interpreted as the process of conservation of what a society perceives as the “optimising relation” between demand and *requisita*, hence as the process of transmission of the encyclopaedia from one generation to another. Epistemic innovation, on the contrary, is a matter of individual efforts. In so far as the individual knower—i.e. the ultimate source of new knowledge—is concerned, his or her cognitive relation with reality is regulated and directed by the demand for knowledge every time anew, as a reaction to the physical and cultural environment in which the subject finds himself or herself. We have discovered no

way of altering our physical nature yet, and the re-appropriation of the encyclopaedia is a new process for every single human mind. On the contrary, the transformation of the encyclopaedia, interpreted as the cumulative succession of (what in the long run must be considered, for reasons seen above) ever more adequate efforts to satisfy the demand for knowledge, amounts to a true alteration in the memory of the system, even if particular alterations sometimes end up by cancelling each other out. You and I do not perceive pain and cold or see the blue of the sky differently from Plato, nor is our way of reasoning dissimilar from Aristotle's, yet our knowledge, shaped by the state of the encyclopaedia in which we find ourselves, is not only radically different from theirs, but also better—and would be recognised to be better by Plato or Aristotle themselves, if they were alive nowadays. For it is better in the moderate sense I specified above: the production of knowledge is an answer to a primary demand which, at the same time, settles the principles to be satisfied by the product, so that the history of knowledge is to a large extent the history of increasingly careful and better ways of answering this demand.

As in the case of the demand for knowledge, it would not be very difficult now to characterise in various ways the nature of the regulative principles which are established by the demand itself, and on whose basis the assessment and hence the alteration of the encyclopaedia is regulated. But it would also be equally premature. We do not need to enter in a detailed discussion of what the contents of the principles can be. If only a logical description of the demand for knowledge as *primary* and *compelled*—no matter how we characterise it further—is capable of providing us with a vindication of the existence of the encyclopaedia, likewise, no matter what specific principles a theory will select—and it should probably select them on the basis (though not exclusively by means) of historical induction—such principles will have two, inevitable, logical features:

- they will be characterised as requirements established by the demand itself

- they will all share an intrinsic tendency to enhance the development of mental life.

The two points are strictly connected. The former is just another way of saying that the principles in question are nothing other than the result of interpreting the demand as also the final cause of the process of knowing. Being derived from the specific interpretation of the nature of the primary demand for knowledge, they can also be employed to regulate our critical assessment of the nature of the product. The latter point specifies that, although there may be several principles that can be formulated as particular ends—whose satisfaction then improves the likelihood that a particular stage or feature of the encyclopaedia will be found to be more in line with the demand for knowledge, and so will be esteemed to be better than another stage or feature—in general any such principle will depend upon the ultimate aim of providing the mind with a better habitat. The proto-mind is forced by its environment to manifest a primary demand for knowledge, which makes some extension of knowledge necessary in order for the proto-mind to survive as, and hence develop into a mind. The more the mind develops, the more it requires a better type of knowledge. The nature of the encyclopaedia can then be evaluated on the basis of its aptness to satisfy the initial need for knowledge increasingly well. As a result, no matter how a theory selects them, the principles governing the assessment of the evolution of knowledge must be mind-enhancing and grant that, whatever transformation the encyclopaedia undergoes, it can be appraised in relation to the construction and improvement of an intellectual habitat in which the life of the mind can continue to flourish as it has done so far.

14. On the Nature of a Gnoseology

What is still indispensable, now that we have reached the end of our present investigation, is to verify whether our gnoseology complies with all the requisites and limitations that have been laid down in

previous chapters. So let us consider what the formal properties of a gnoseology are.

In so far as it offers a vindication of the occurrence of Σ by means of a negative description of the *ratio essendi* of (that is the primary demand for) Σ , a gnoseology does not commit a *petitio principii*. And in so far as it offers a vindication of the nature of Σ by means of a description of the relation between the demand as *causa finalis* and the *requisita* of Σ , a gnoseology does not commit a naturalistic fallacy either. The production of a gnoseology does not in itself incur a *circulus in probando*, but complies with Husserl's *Prinzip*, because it does not appeal to any member of Σ in order to support Σ , nor are the last contents, on which the gnoseological analysis is based, taken from whatever extension of Σ has been already challenged by the sceptic, but arise from the logical denial of a fundamental premise the sceptic himself ought to be ready to give up as utterly unjustified, namely the intellectualist view concerning the pure desire for knowledge. All this is not equivalent to claiming, however, that a gnoseology approaches its object from without, assuming a kind of God's eye perspective. On the contrary, precisely because it denies the sceptic, through the sceptical method itself, the possibility of assuming the *vis cognoscitiva*, the spontaneous desire for knowledge, as a satisfactory explanation of the genesis of the encyclopaedia, a gnoseology eliminates any conceptual space external to the system of knowledges itself, reaching the highest level of abstraction, the transcendental, without overstepping the limits of knowledge. Critical reflection, deprived of a superficial appeal to a fanciful hypothesis, is left with the problem of explaining the presence of a system of possible knowledges. The most economical suggestion is then that the system is what makes possible the critical reflection that is investigating its own (the system's) nature. A gnoseology examines knowledge from an internal point of view and since, as part of the philosophy of knowledge, it eventually cannot but be considered an element of Σ , it follows that its conclusions are directly applicable to the theory itself, as shown by the fact that an interpretation of the

demand for knowledge as a primary need provides an answer both to the higher-level question of why we search for a theory of knowledge which is not affected by any *petitio principii* and to the lower-level question of why we search for knowledge at all. A gnoseology is not caught up in the same difficulties undermining the Cartesian strategy for three reasons. Because it starts from the broadest context of the presence of the encyclopaedia then

- 1) it can trace the source of knowledge back one stage further than the *cogito* itself. The latter stops at the discovery of the identity between the process of doubting and the process of thinking, but the interpretation of the demand for knowledge as a primary need shows that any kind of critical thinking—be it sceptical or dogmatic—can develop only in the presence of a minimal extension of (possible) instances of knowledge. The critical life of the mind does not precede but succeeds the occurrence of some initial knowledge;
- 2) it can rely only on the negation of the presuppositions of the epistemological reconstructions and consequently of the sceptical challenge, instead of hinging on the purely logical phenomenon represented by the empirically unextended experience of the *cogito*. This allows a gnoseology to reach a philosophical content, at the end of its analysis, namely the description of the primary demand for knowledge as primary-compelled, and of its principles as mental-life-enhancing, whereas the Cartesian strategy is confronted with the difficulty of being caught in subjective certainty, from whose content-emptiness it can escape only by begging the question.
- 3) And finally, because in the course of the escalation it is able to take advantage of the falsificationist suggestion and discards the assumption of too strong a conception of validation in favour of the notion of vindication.

For these reasons, the gnoseological strategy is indirect, that is apagogic. Not only does it reach its conclusion simply by uncovering and uprooting the presuppositions shared, at various epistemological

levels, by the different strategies developed in the past against the *diallelus*, it also undermines the sceptical attack itself from within, i.e. by accepting the latter's policy of thorough criticism. Although it may be said to adopt a scorched earth policy against the sceptic, a gnoseological strategy is not merely anti-sceptical, since at the end of the investigation radical doubts are not rejected but employed and exhausted. In fact, by tracing back the various presuppositions, a gnoseology purifies the study of knowledge of all dogmatic deposits. The reader will recall that the introduction of the sceptical questioning, as the motive of the investigation of the nature of knowledge, is not a mere expedient, serviceable exclusively to present epistemological themes, but represents the essential method whereby the most fundamental level at which a theory of knowledge is supposed to work can be reached. Scepticism must ultimately be interpreted as the will to investigate and therefore as the inseparable shadow of any system of knowledge at least since Descartes, who

converted skepticism from being an obstacle to metaphysical inquiry to being a tool of it.³⁷

This is precisely the view endorsed by a gnoseological strategy. Within a gnoseological analysis, the sceptical questions represent the method whereby the theory ascends from the acceptance of naive certainties to the systematic reconstruction of the universe of knowl-

³⁷ B. Williams, "Descartes' use of Skepticism" in M. Burnyeat (ed.), *The Skeptical Tradition*, p. 337-352, quotation from p. 350. The point is further reinforced by Burnyeat when he writes that "[...] when scepticism goes transcendental, the expression "the sceptic" has to lose the historical reference it still carries in Hume, its connection with what certain historical figures actually said and thought. It becomes the name of something internal to the philosopher's own thinking, his later ego as it were, with whom he wrestles in a debate which is now a philosophical debate in the modern sense", "The Sceptic in his Place and Time", in R. H. Popkin and C. B. Schmitt (eds.), *Scepticism from the Renaissance to the Enlightenment*, pp. 13-43, quotation from, pp. 34-35. The only problem is that if we were to follow Burnyeat's questionable terminology, we should say that "scepticism has gone transcendental" at least since Descartes.

edges, discharging the various presuppositions it encounters on its way. The conclusive elimination of the intellectualist hypothesis of the desire to know in favour of the primary demand for knowledge, by transforming knowledge into the *conditio sine qua non* for the development of mental life, renders the strategy anthropologically more critical than scepticism itself. This allows the final insertion and interpretation of the unfolding of the sceptical challenge within the growth of the theory, as part of the process which leads to the search for a theory of knowledge.

On the basis of what has been said so far, there are some logical features that will have to be shared by any possible gnoseology.

- A gnoseology is *causally descriptive* and *teleological*.

These two characteristics are a direct consequence of the two kinds of answers available for a why/how-question: one causally-descriptive, obtained by describing the reasons which explain the matter of fact at stake, and the other finalistic, achieved by presenting some particular goal which an action or event aims at. It seems uncontroversial that a gnoseology cannot but be causally descriptive and teleological so that it can interpret the demand for knowledge as both the *ratio essendi* which vindicates the genesis of the encyclopaedia and the *causa finalis* establishing the principles that vindicate its nature.

- A gnoseology is *normative*.

Since a gnoseology is still a branch of epistemology in the widest sense of the word, i.e. it is still a philosophical investigation of knowledge, it shares with the latter the characteristics described in the second chapter. Without repeating here what was said then, it is worth stressing that, in so far as a gnoseology provides an analysis of the “optimising relation” between the demand and the *requisitum*, it has the critical function of assessing the nature both of the members of Σ and of the procedures that lead to their formulation. Such a normative function achieves the goal of limiting epistemological relativism and of evaluating whether or not certain epistemic ways of dealing with external reality are more satisfactory than others, on the

basis of the description of the nature of the primary demand for knowledge, that is in connection with the reasons why there is an epistemic relation between mind and being at all. No matter how the primary demand for knowledge is specifically interpreted, its basic nature is such as to relieve the mind of epistemic responsibility with respect to the *necessity* of a system of knowledges. But although a gnoseology considers the proto-mind to be bound, by definition, to produce at least a limited epistemic environment—for mental life can develop solely within the encyclopaedia, and in investigating the nature of knowledge we are witnessing precisely an expression of mental life made possible by the presence of a system of knowledges—it also sees it as free as regards, and therefore responsible for, the *nature* of the particular outcome of such a production. As far as the nature of Σ is concerned, a gnoseology considers the mind to be fully responsible for its construction but, if some selection of possible knowledges is necessary as far as the demand is concerned, not just any selection of them is possible, given the relation between cognitive and ontic *requisita*, and not every possible selection of possible knowledges will be acknowledged as satisfactory, given the *specific characterisation* of the demand. Therefore, there must always be an encyclopaedia, but at any stage in its history the encyclopaedia is inevitably subject to enlargement and improvement.

- A gnoseology is *nomological*.

Not all the features of a gnoseology are simply inherited from its epistemological nature. A gnoseological theory should also be considered *nomological* in so far as it has the characteristic of presenting the *requisitum* and above all the demand for knowledge as logically and economically governed by constant and universal principles. We would not be satisfied by a gnoseology which merely presented a few examples of how a particular individual comes to entertain an epistemic relation with reality and ends up by formulating some basic beliefs on an idiosyncratic and occasional basis. A gnoseology must supply us with some general principles through which we may be able to interpret in general why and how there comes to be an

epistemic relation between subject and object as two separate and fully constituted elements. It should indicate the main processes which bring a non-epistemic relation between the proto-mind and external reality to develop into an epistemic one between the knowing mind and the known environment, and hence allow the creation of the system of knowledge as the habitat of the mind.

- A gnoseology is *not prescriptive*.

For a gnoseology, being *nomological* and *normative* is not equivalent to being *prescriptive*. *Gnoseological principles* describe only the logical pattern followed by the dynamic development which the genesis of the process of knowing can be thought to follow. They should not be confused with *norms* for correct or more fruitful cognitive conduct to be suggested, like the Cartesian *Regulae ad directionem ingenii*,³⁸ to an individual knower S. Given the transcendental level of discourse, a gnoseology is normative with respect to the epistemic strategy of the mind, not the cognitive tactics of the individual knower. Nor should the gnoseological principles be confused with the *normative criteria* of knowledges we have encountered in previous chapters; with the *logical laws* followed by the system of knowledges in its internal developments, such as induction or the *modus ponens*; with the *practical/historical law-like generalisations* presented in disciplines like the sociology of knowledge, the theory of communication, the theory of information or the history of science to explain the organisation and development of the encyclopaedia; or finally, with the *external logical principles* (which are supposed to be) followed by a scientist and which are the subject of a normative theory of the growing process i.e. *methodology*.

- A gnoseology is *transcendental*.

³⁸ *The Philosophical Writings of Descartes* vol. I, pp. 7-78. Eventually such *Regulae* could be united with the *Criteria* to constitute the same topic as a *Criteriaology* (about which, see next chapter). But for a sceptical opinion—to which I would subscribe—as to the value of the former norms see for example M. Swain, “Epistemics and Epistemology”, *The Journal of Philosophy* 75 (1978), pp. 523-25.

In promoting the passage from epistemology, as a theory of knowledges, to epistemology as *also* a theory of the genesis of knowledges, a gnoseology advocates the association of an extensional with an intentional, though not merely subjective, approach. By fostering the transition from validation to vindication, the gnoseological strategy encourages a possible encounter between the neo-Cartesian, normative party of justification and the hermeneutic, descriptive party of interpretation. By considering the demand for knowledge the most crucial of all the epistemological questions, a gnoseology supports the insertion of the epistemological investigation into a more comprehensive, ontological domain, in which knowledge is seen as the necessary counterpart of the subject's being in the world as a mind. Marco Invaldo has written that:

La domanda della filosofia trascendentale verte sulle condizioni di attuazione e di funzionamento della necessaria relazione fra sapere ed essere, sui fondamenti a priori della congruenza e della corrispondenza fra conoscenza e oggetto della conoscenza [...] Il piano della filosofia trascendentale è quello di una ontologia del sapere, piano ulteriore e fondativo rispetto a quello della teoria della conoscenza come analisi del rapporto soggetto-oggetto. [The transcendental philosophy investigates the conditions of realisation and functioning of the necessary relation between knowledge and being, the a priori grounds for the congruence and correspondence between knowledge and its object. [...]] The level at which the transcendental philosophy works is that of *an ontology of knowledge* [my emphasis], a level which is beyond, and fundamental with respect to the level of a theory of knowledge understood as the analysis of the relation between subject and object.]³⁹

As a transcendental study of the *ratio essendi* of the epistemic rela-

³⁹ M. Invaldo "Dottrina della Scienza e filosofia trascendentale: Fichte di fronte a Kant" in G. Micheli and G. Santiniello (eds.) *Kant a Due Secoli dalla "Critica"* (Brescia: La Scuola, 1984), pp. 223-232, quotation from p. 224. Invaldo refers the reader to M. J. Siemek "Fichtes Wissenschaftslehre und die kantische Transzendentalphilosophie" in K. Hammacher (ed.), *Der Transzendente Gedanke. Die gegenwaertige Darstellung der Philosophie Fichtes* (Hamburg: Felix Meiner Verlag), pp. 524-31.

tion between mind and being, a gnoseology provides, at the level of the ultimate self-reflection, a vindication of the conditions of possibility of the encyclopaedia and of its nature. We have seen in what an indirect way such a *negative ontology of knowledge* must be constructed in order to escape the metaepistemological problem.⁴⁰

15. *From Epistemology to Gnoseology*

It seems that we are now at a cross-roads. We can either decide to identify a philosophy of knowledge with the analysis of the extension of knowledge and then follow Chisholm's proposal that one should "beg the question", in a more or less refined version; or we can decide to avoid any radical step like an epistemological *petitio principii* and ground the analysis of knowledge in a philosophical reconstruction of the genesis of the process of knowing, and therefore in the negation of an ontological and excessively intellectualist hypothesis about the relation between mind and reality. Certainly Chisholm's "begging the question" proposal is not appealing. Yet, as far as I know, it might be the sole alternative if a gnoseological approach to the vindication of the genesis of the encyclopaedia should turn out to be impossible, for reasons other than those seen so far. In the next chapter I shall try to show that this is not the case. I shall defend the thesis that, apart from being an attractive strategy for solving the metaepistemological problem, a gnoseological theory of the genesis of knowledge is also reasonably available and fully acceptable as a branch of the philosophy of knowledge.

⁴⁰ D. E. Bradshaw has defended the need for an ontology of knowledge from the perspective of internal coherentism in "On the Need for a Metaphysics of Justification", *Metaphilosophy* 23 (1992), pp. 90-106.

CHAPTER SEVEN

AGAINST THE DISSOLUTION OF THE PROBLEM

THREE OBJECTIONS

*But after all, I'm in a desperate fright;
And for three reasons.
Richard Warner, *The Cheat*.*

1. The Philosophy of Knowledge: Questions and Disciplines

In our search for an answer to the metaepistemological problem, the previous chapter forced us to make such a long incursion into sceptical territory that it is now more prudent to gather our forces, as it were, before confronting a new and final battery of objections from three different quarters. Very briefly, we need to determine what kind of structure a philosophy of knowledge acquires on account of the proposal put forward in the previous chapter, hence how gnoseology's place comes to be outlined within such a structure and, finally, what type of objections can be moved against a gnoseology that is so characterised.

To begin with, let me recapitulate some of the questions we encountered in previous chapters.

In chapter two, three genetic questions were introduced:

- G_1) what is the genetic process that leads to the occurrence of the process of knowing—in which the subject comes to entertain an epistemic relation with the object—and hence to the construction of the system of knowledges?
- G_2) what is the genetic relation that links the cognitive processes of a knower S to the production of S ' knowledges? and
- G_3) what is the genetic relation between initial knowledges as

input, logical methods and new knowledges as output?

In chapter 3, we discussed Chisholm's two fundamental questions:

- E) What is the extent of our knowledges? (what do we know?)
And
- C) What are the criteria of knowledges? (How are we to decide whether we know?)

In chapter six, a new set of questions were asked:

- Q) What justifies (the weakly coherentist reconstruction of) Σ ?

This was interpreted as meaning

- Q₁) What can justify a determinate class of members of Σ ? But also
- Q₂) What can justify the occurrence of Σ as a whole?

Q₂ was then interpreted as a combination of two more specific questions:

- Q_{2a}) How is Σ being produced? And
- Q_{2b}) Why is there such a phenomenon as Σ at all?

And Q_{2b} was eventually interpreted as consisting of two separate questions:

- Q_{3a}) Can the *existence* of the encyclopaedia be vindicated?
- Q_{3b}) Can the *nature* of the encyclopaedia be vindicated in a way that still leaves room for critical evaluation of it?

Finally, we discussed Moore's questions:

- M₀) How do we *know* anything at all?

This was interpreted as meaning

- M₁) What sort of thing is knowledge? What happens when we know anything?
- M₂) What is knowledge? What is meant by saying that any proposition is true?
- M₃) What are all the different sorts of reasons which are good reasons for believing anything?

To this list was added:

- M*) Why do we know anything at all?

Disregarding the more general questions in favour of their more specific ones, we can now rearrange the whole lot into four groups:

- 1) borderline questions that a philosophy of knowledge shares with other cognitive studies: G_2 , G_3 , Q_{2a} and M_1
- 2) questions concerning the criteria of Σ : C , Q_1 , M_3
- 3) questions concerning the evaluation of the nature of Σ : E , Q_1 , M_2
- 4) questions concerning the genesis of Σ : G_1 , Q_{3a} , Q_{3b} , M^* .

From such a classification, it follows that a philosophy of knowledge can be organised into three disciplines, each of them concerning one main area of study:

- a) *Criteriaology*¹ investigates the criteria of the encyclopaedia;
- b) *Epistemology* investigates the nature of the encyclopaedia; and
- c) *Gnoseology* investigates the genesis of the encyclopaedia.

This is the internal structure of a philosophy of knowledge that we are led to endorse by following the apagogic solution introduced in the previous chapter. Clearly, the structure is

- not a model but an empty scheme which can be filled by different theories
- a scheme that applies to a theory of knowledge, not to some alleged order followed by the cognitive life of a historical knower,
- anti-Cartesian.

The first two features should be intuitive. The last point indicates a particular trait of gnoseology, which constitutes the starting point for the three kinds of criticism we shall discuss in a moment. In itself, it reminds us that the scheme considers the epistemological analysis of the encyclopaedia to rest upon a moderately-coherentist rather than a purely foundationalist strategy, and the coherentist reconstruction of the encyclopaedia to be grounded upon a genetic investigation. According to the virtuous reconstruction of the internal feedback of the coherentist system of knowledges, a theory of the genesis of Σ is

¹ In using such a term to refer to the philosophy of criteria I am here following Chisholm and Mercier, cf. R. Chisholm, "The Problem of the Criterion" in *The Foundations of Knowing* (Brighton: The Harvester Press, 1982), Part III, Chap. V, which refers to D. J. Mercier, *Criteriologie Generale ou Theorie Generale de la Certitude* (Louvain: Institut Supérieur de Philosophie, 1923; first published in 1884).

logically prior to, and capable of vindicating, the analysis of the system of knowledges, which can in turn be presented, though now not inevitably so,² as logically prior to the elaboration of criteria of Σ . The scheme accepts Chisholm's suggestion of starting with an answer to E and it grants, still with Chisholm, the possibility of elaborating some criteria of knowledges on the basis of such an answer. It then presents a gnoseology as the *fundamental* discipline for a model of a theory of knowledge. As a result, the structure just outlined turns out to be no more foundationalist and Cartesian than

² Here, as in the previous chapter, I have adopted a rather standard, *propositional* interpretation of the notion of justification, according to which if the *justificans* p justifies the *justificandum* q, then p is the justification of q, see for example K. Lehrer, *Theory of Knowledge*, (London: Routledge, 1990), p. 13: "basic beliefs constitute the evidence in terms of which all other beliefs are justified according to the foundation theory". However, it is possible to interpret the notion of justification *criteriologically*, as Feigl does: "More fully explicated, justification consists in the disclosure (exhibition, demonstration) of a conformity of that which is to be justified (the *justificandum*) with a certain principle or a set of principles which do the justifying (the *justificans*). [...] Justification as here understood thus invariably involves at least an implicit reference to standards or norms [...]", see H. Feigl, "De Principiis non disputandum ...? On the Meaning and Limits of Justification", first published in M. Black (ed.), *Philosophical Analysis* (Ithaca-New York: Cornell University Press, 1950), pp. 119-156 and then reprinted in H. Feigl, *Inquiries and Provocations—Selected Writings 1929-1974*, edited by R. S. Cohen (Dordrecht: Reidel, 1981) Chap. XIV, quotation from p. 238. In this case, a gnoseological strategy could start from a vindication of the criteria of knowledge (what Feigl calls the *justificantia*, the justifying principles) rather than an initial extension: "Validation terminates with the exhibition of the norms that govern the realm of argument concerned. If any further question can be raised at all, it must be the question concerning the pragmatic justification (vindication) of the (act of) adoption of the validating principles.", see H. Feigl, "Validation and Vindication: An Analysis of the Nature and the Limits of Ethical Arguments", first published in W. Sellars and J. Hospers (eds.), *Readings in Ethical Theory* (New York: Appleton-Century-Crofts, 1952), pp. 667-680, reprinted in H. Feigl, *Inquiries and Provocations—Selected Writings 1929-1974*, edited by R. S. Cohen (Dordrecht: Reidel, 1981) Chap. XXI, quotation from p. 386.

Bradley's or Blanshard's theories of knowledge.³ Rather than a foundationalist approach, it represents an obviously hierarchical structure, a characteristic that by itself would not inevitably be anti-Cartesian, were it not that it is connected with an "externalist" orientation. For according to the proposal for a "negative ontology of knowledge", the coherentist system of extension and criteria of knowledge is to be grounded on a certain reconstruction of the relation between mind and being, and since the theory investigates the negative ontological grounds,⁴ rather than the positive epistemological foundations, of knowledge, it does not give any attention to the task of discovering a basis of self-evident or super beliefs, an epis-

³ See J. P. Dancy, "On Coherence Theories of Justification: Can an Empiricist be a Coherentist?", *American Philosophical Quarterly* 21 (1984), pp. 359-365, and J. P. Dancy, *An Introduction to Contemporary Epistemology* (Oxford: Blackwell, 1985) Chap. VIII, where he refers to B. Blanshard, *The Nature of Thought* (London: Allen and Unwin, 1939), and F. H. Bradley, *Essays on Truth and Reality* (Oxford: Oxford U. P., 1914).

⁴ As the scheme is conceived, I fear it will not be welcome to externalist philosophers without some revision. Judging from his *Belief Truth and Knowledge* (Cambridge: Cambridge U. P., 1973), D. M. Armstrong would probably force us to speak of epistemological external *foundations* of a theory of knowledge (disregarding the distinction between a genetic explanation and an epistemological justification of the initial extension of knowledges), while Goldman would assume, I take it, a rather psychologistic attitude towards the process of knowing and its gnoseological study, see his *Epistemology and Cognition* (Cambridge, Mass.: Harvard U. P., 1986) together with his "Precis and Update of *Epistemology and Cognition*" in M. Clay and K. Lehrer (eds.), *Knowledge and Scepticism* pp. 69-87. (Boulder: Westview P., 1989), which summaries the principal themes of the book and provides some new refinements, and "Psychology and Philosophical Analysis", *Proceedings of the Aristotelian Society* 89 (1989), Part III, pp. 195-209. In "The Relation Between Epistemology and Psychology", *Synthese* 64 (1985), pp. 29-68 Goldman has supported the relevance of psychology to epistemology, understood as a normative discipline, by arguing that the normative notion of epistemic justifiedness can be analysed in terms of "permissibility by right epistemic rules", and the latter can be examined in terms of cognitive states and operations by empirical psychology.

temological *unmoved mover* à la Descartes, from which to start the justification of the whole system.⁵ The crucial point, the one which here interests us most, is that within the scheme outlined, a gnoseology achieves the status of the most fundamental branch of a philosophy of knowledge. This is a claim that may be questioned in various ways.

2. Three New Objections

We started our investigation into the metaepistemological problem by discussing the uncertain situation in which an analysis of the system of knowledges finds itself, unless it is anchored to a reconstruction of the genesis of the process of knowing. The conclusion reached by our investigation is that a philosophical theory of knowledge without a gnoseology is severely inadequate: to be sound, an articulated philosophy of knowledge must make provision for a fundamental, philosophical theory of the genesis of the encyclopaedia, by referring to the primary demand for knowledge on the part of the proto-mind. We have ended up by sketching the kind of structure a philosophy of knowledge must assume in order to comply with the apagogic proposal. Now, in order to itemise the kind of objections that can be moved against such a proposal, the most efficient way of proceeding is to break the latter down into the three theses of which it is composed, namely:

- i) a gnoseology represents a *successful strategy* against the metaepistemological problem;
- ii) because of (i), a gnoseology is the most *fundamental branch* of a philosophical theory of knowledge; and
- iii) in relation to (i) and (ii), a gnoseology is perfectly possible as a *philosophical branch* of a theory of knowledge, and hence does

⁵ See Chisholm's concept of privileged basic beliefs as the *unmoved mover* in R. Chisholm, *Theory of Knowledge*, second edition (Englewood Cliffs, New Jersey: Prentice-Hall International Editions, 1977), p.25.

not necessarily fall within the theoretical jurisdiction of any other cognitive sciences.

We have already examined two of the objections that can be moved against (i) namely:

- Ob.1) a gnoseology commits the *naturalistic fallacy*. We may call this Rorty's objection; and
- Ob.2) for the very reason that a gnoseology does not commit the naturalistic fallacy, it cannot solve Chisholm's puzzle, since it is just another way of begging the question, by lapsing into a different kind of *petitio principii*. This is Sextus' objection. A theory of knowledge which appeals to a primary demand for knowledge, in order to anchor the system of extension and criteria of knowledges, is in fact merely *assuming* a particular conception of the genesis of the encyclopaedia.

I hope the previous chapter has succeeded in showing how these two objections can be by-passed, so that it is not necessary to return to the topic. There is, however, a further question that arises with respect to (i), for one may argue that:

- Ob.3) there is no need to develop a gnoseology based on the primary demand for knowledge because there is already a satisfactory approach to the genesis of the system of knowledge, in terms of the analysis of reliable epistemic processes.

This is the first new objection on our agenda. The other two concern theses (ii) and (iii).

Against (ii), it is possible to contend that, though a gnoseology may be feasible and perhaps even successful, it does not represent the most fundamental of the philosophical studies of the nature of knowledge:

- Ob.4) there could be some sort of gnoseology, perhaps as a branch of some cognitive science, whose area of study might be important, yet, this is not fundamental for further epistemological studies (which in fact are not "further" at all, according to this position, and are "epistemological" not in the sense introduced above, but in the sense of "belonging to the philosophy of knowl-

edge”, where the philosophy of knowledge is identical with epistemology).

Ob.4 may be even more radical and argue that, as far as a philosophy of knowledge is concerned, the very introduction of a gnoseology as a philosophical discipline is a mistake, because it would amount to admitting psychologism or subjectivism or both within the domain of what should be a purely logical study of objective knowledge. The philosophy of knowledge as epistemology is not concerned with the knowing subject, let alone grounded on a theory of the genesis of the process of knowing.

The last objection we are going to examine asserts, against (iii), that:

- Ob.5) any study of the genesis of the process that leads to the creation of the encyclopaedia either belongs to some cognitive science or it is not a proper way of investigating the subject. Therefore, either gnoseology is not really important or, if it is, it is not a philosophical discipline.

According to Ob.5, there is nothing like a first philosophy as sketched above, and the vicious circle between extension and criteria of knowledge cannot be anchored within the philosophical studies. The objection can develop further by asserting that some cognitive science should investigate (is already investigating) the genesis of the process of knowing and that, quite probably, in the future the whole discipline of the philosophy of knowledge will disappear, leaving space only for specialised branches of other cognitive sciences. Roughly speaking, cognitive sciences represent a more adequate approach to the problems arising from the attempt to understand the nature of human knowledge, and, in the same way that physics has supplanted philosophy in the investigation of the nature of empirical reality, so cognitive sciences will replace epistemology in so far as our understanding of human knowledge is con-

cerned, rendering the latter discipline first obsolete and then useless.⁶

These five objections criticise all the most essential aspects of the proposal for the introduction of a gnoseology. They form a pattern in which the first and last pairs of objections seem to show a certain parallelism. On the one hand, (Ob.1) argues against the significance of a gnoseology by excluding it from the context of the justificatory logic within which the vicious circle arises; likewise, (Ob.5) accepts the possibility of a gnoseology but questions its *fundamental role*, seeing it as thoroughly irrelevant for, and hence external to, the territory of a philosophy of knowledge. On the other hand, (Ob.2) disputes the value of a gnoseology by denying that the latter really escapes the *petitio principii*; likewise, (Ob.4) disavows gnoseology's *philosophical nature* by contesting the claim that it holds a firm and privileged position at the roots of all epistemological studies. Any other objection that can be moved against the proposal for a gnoseology can be linked back to this set, either as a more complex version or as a different conjunction of the five objections listed above. As I have already remarked, Ob.1 and Ob.2 have been dealt with in relation to the gnoseological solution of the problem of the criterion. So the rest of this chapter will be devoted to the last three objections. Their discussion will provide an additional opportunity to clarify what a gnoseological study is, thus representing the conclusion of our metaepistemological investigation.

3. *Against the Nature of a Gnoseology*

Contemporary works in analytic epistemology can be schematically

⁶ Such arguments may occasionally be very naive, for they seem to presume that, contrary to what happens with epistemology, there are no real problems concerning the theoretical status of cognitive sciences, a point which is all but uncontroversial, see for example D. A. Norman, "What is Cognitive Science?" and "Twelve Issues for Cognitive Science", both in D. A. Norman (ed.), *Perspective on Cognitive Science* (Norwood, New Jersey: Ablex Pub. Corp., 1981), pp. 1-12 and pp. 265-294.

arranged into two groups:

- 1) those concerning the analysis of knowledge as justified true beliefs (JTB); and
- 2) those concentrating on the analysis of various types of knowledge.

Together with

- 3) other past theories of knowledge

these are the three sources from which important components for a model of the genesis of the process of knowing may be drawn. As such, they may also seem to lay down a sound basis upon which the interpretation of gnoseology as fundamentally a theory of the primary demand for knowledge could be challenged. That this is not the case, however, can readily be determined when (2) and (3) are in question, while a slightly lengthier examination will be required to reach the same verdict about JTB-theories.

In elaborating a fully-fledged gnoseology, the first prospect is to recuperate some (elements of) theories of knowing from the past. Examples are virtually endless, since many disparate approaches could provide interesting models for the logical reconstruction of the genesis of the process of knowing leading to the constitution of the encyclopaedia. If, in the present circumstances, we can get away with such a cursory note, it is only because it is obvious that (Ob.3) is not disputing whether epistemological eclecticism is compatible with the proposal put forward in support of a gnoseological foundation of epistemology. The same holds true for contemporary studies of types of knowledge. The latter may be interpreted as the field which has inherited from past philosophy the task of investigating the nature of the genesis of knowledge. Consequently, theories of memory, of a priori/a posteriori knowledge, of perception, or of mathematical knowledge all seem to provide plenty of material for a possible philosophical model of the genesis of the encyclopaedia.⁷

⁷ In particular, an interesting source of information appears to be studies in the causal theory of perception, see for example H. P. Grice, "The Causal

Still, there are three difficulties, common to all these studies, which prevent them from representing a real alternative to a gnoseological strategy:

- Contemporary studies of types of knowledge constitute disparate investigations of distinct types of knowledge rather than complete theories of different aspects of the whole process of knowing. So, even if such studies were relevant, there remains the problem that our gnoseological scheme obviously cannot be completed by a theory of the genesis of just one particular way of knowing.
- Even if they were relevant, and could provide a more global interpretation of the genesis of knowledge, typological studies are usually not concerned with the basic problem of specifying what justifies the phenomenon of knowledge *tout court*, so they do not address the metaepistemological problem.
- It is not very clear how different their approach is from that of cognitive sciences and hence whether typological studies would be able to avoid being caught in the fallacy of *petitio principii*, should they actually attempt to provide a solution to the metaepistemological problem.

It follows that it is very unlikely that any study of the types of knowledge, interpreted in the sense just specified, could actually represent a theory of the primary demand for knowledge and hence fulfil the same task as a gnoseological investigation. We come in this way to discussion of the most interesting case: contemporary studies concerning the analysis of knowledge in terms of JTB.

Theory of Perception", *Proceedings of the Aristotelian Society* suppl. 35 (1961), pp. 121-52; P. F. Strawson, *Freedom and Resentment and Other Essays* (London: Methuen, 1974) Chap. IV entitled "The Causal Theory of Knowledge"; D. Pears, "The Causal Theory of Perception", *Synthese* 33 (1976), pp. 41-74; and C. Peacocke, *Holistic Explanation: Action, Space, Interpretation* (Oxford: Oxford U. P., 1979) Chap. II.

3.1. *Reliabilism and Justified True Beliefs*

Once the technical minutiae are removed, the logic of all Gettier-type problems is quite simple: as far as empirical knowledge is concerned, the best of all epistemic behaviours is never sufficient to ensure that our beliefs may not turn out to be justified but false—warns the sceptic—or true, but just by virtue of sheer luck—warns Gettier—revealing, in both cases, that we do not know what we are talking about.⁸ In order to solve Gettier-type problems, it has become common, though by no means uncontroversial, to defend *causal* theories of knowledge and theories of knowledge concerning *reliable process*. We have already encountered such theories in chapter five, where they were criticised as possible indirect solutions of the meta-epistemological problem. We shall now analyse their limits as possible alternatives to a gnoseological approach. The point is that, since in causal or reliabilist theories the process of knowing plays an essential role for the explanation of the concept of justification, one may argue that such a critical concern should make them count as possible alternatives to our gnoseological strategy. This, however, would be misleading. Overtly, reliabilism addresses a rather different set of problems; it does not aim, even implicitly, to tackle the gnoseological issue, and hence we should not confuse a genetic approach with any analysis of justified true beliefs in terms of epistemic process. Let me explain in more detail why.

The first interesting⁹ appearance of the causal process of knowing

⁸ R. Shope, *The Analysis of Knowing* (Princeton: Princeton U. P., 1983) provides an early survey of the literature on Gettier-type problems. Even a cursory reading of the text cannot fail to convey a lively impression of the unfortunate stalemate already reached by discussions of the issue more than ten years ago.

⁹ As D. M. Armstrong observes: “Ramsey’s brief note on ‘Knowledge’, to be found among his ‘Last Papers’ in *The Foundations of Mathematics*, puts forward a causal view. A sophisticated recent version of causal theory is to be found in [...] Goldman’s ‘A Causal Theory of Knowing’”. See A. Goldman “A Causal Theory of Knowing”, *Journal of Philosophy* 64 (1967) pp.

in contemporary epistemological studies, as well as a further, explicit appeal to the reliability of such a process, dates back to Alvin Goldman's work.¹⁰ Others have followed his approach,¹¹ but for our present purposes we can restrict our attention to his initial contribution. It is well known that Gettier-type examples show that a definition of knowledge as JTB may be necessary but is certainly insufficient. If we want to maintain the tripartite definition, we must look for further conditions. Goldman¹² suggests that, in order to say that S knows that p, the following must be the case:

- i) p is true;
- ii) S believes that p;
- iii) S is justified in believing that p; and
- iv) there is a causal connection, of an appropriate kind, between the fact that p and the fact that S believes that p.

Obviously (iv) refers to the relation between a knower and whatever the knower is exercising his/her cognitive capacities on, so it can be

355-72, reprinted in G. Pappas and M. Swain (eds.), *Essays on Knowledge and Justification* (Ithaca, New York: Cornell U. P., 1978). Armstrong's quotation comes from *Belief Truth and Knowledge*, p.158; and as regards Ramsey, see *The Foundations of Mathematics* (London: Routledge and Kegan Paul, 1931).

¹⁰ Besides the article by Goldman already mentioned "A Causal Theory of Knowing", see also A. Goldman, "What is Justified Belief?" in G. Pappas (ed.) *Justification and Knowledge* (Dordrecht: Reidel, 1979), pp. 1-23.

¹¹ See D. M. Armstrong, *Belief Truth and Knowledge*; F. Dretske, "Conclusive Reasons", *The Australasian Journal of Philosophy* 49 (1971), pp. 1-22, reprinted in Pappas and Swain (eds.) *Essays on Knowledge and Justification*; A. Goldman, "The Internalist Conception of Justification" in P. A. French, T. E. Uehling and H. K. Wettstein (eds.), *Midwest Studies in Philosophy, V: Studies in Epistemology* 5 (1980); E. Sosa, "How Do You Know?", *American Philosophical Quarterly* 11 (1974), pp. 113-122, reprinted in Pappas and Swain (eds.), *Essays on Knowledge and Justification*; E. Sosa, "The Raft and the Pyramid: Coherence vs. Foundations in the Theory of Knowledge" also in French, Uehling and Wettstein (eds.), *Midwest Studies in Philosophy: Studies in Epistemology*.

¹² A. Goldman, "A Causal Theory of Knowing".

translated in terms of *process of knowing*. Thus, more generally,¹³ we may hold with Goldman¹⁴ that our tripartite definition of knowledge must be supplemented with the condition that a justified¹⁵ true belief fails to count as knowledge unless it has been obtained by means of a *reliable process of knowing*, like visual perception for example. But how are we to understand the overall nature of such a strategy? According to Goldman

The theory of justified belief proposed here, then, is an *Historical* or *Genetic* Theory. [...] Among historical writers, it might seem that Locke and Hume had Genetic theories of sorts. But I think that their Genetic theories were only [sic] theories of ideas, not of knowledge or justification. Plato's theory of recollection, however, is a good example of a Genetic theory of knowing. And it might be argued that Hegel and Dewey had Genetic epistemologies (if Hegel can be said to have had a clear epistemology at all).¹⁶

Obviously, two questions arise immediately: whether reliabilism actually solves Gettier's problem and whether reliabilism, or any similar kind of theory such as deontologism, can be elected to the role of a gnoseology. Let me postpone discussion of the former question for a moment. I shall comment on the whole issue of the "Gettierisation" of empirical knowledge in due time, but first we need to consider a number of reasons that tell against the possibility of considering any theory such as reliabilism as a gnoseological strategy.

Of the two central questions addressed by a gnoseology, namely

Q_{3a}) Can the *existence* of the encyclopaedia be vindicated?

Q_{3b}) Can the *nature* of the encyclopaedia be vindicated in a way

¹³ For the suggestion that causal theories of knowledge are special interpretations of theories of knowledge based on reliable processes see for example J. P. Dancy, *An Introduction to Contemporary Epistemology*, p. 31.

¹⁴ A. Goldman, "What is Justified Belief?"

¹⁵ I have here disregarded, as irrelevant, the otherwise interesting distinction between "S being justified in believing that p" and "p being a justified belief", see also Goldman's analysis of *ex-ante* and *ex-post* justified belief in "What is Justified Belief?", p. 21.

¹⁶ A. Goldman, "What is Justified Belief?", p. 14.

that still leaves room for its critical evaluation?

reliabilism certainly does not attempt to answer the former and, although it may appear to concentrate somehow on the latter—by trying to answer the question as to how S' beliefs can be vindicated—a closer analysis reveals that reliabilism can have at most only marginal pertinence to the genetic problem. Firstly, it concentrates indifferently on *activities* and then *organs* involved in the process of knowing—such as reliable visual perception or the eyes—and *ways of coming to know*—like reading a newspaper or listening to what Mother says—interpreting each of the former as the process itself, whereas gnoseology attends to the common genetic process that underlies any initial creation of knowledge. Secondly, even when reliabilism characterises the process of knowing in terms of causal relation, its ultimate goal is only that of discovering a possible solution for the explanation of the concept of justification and hence for the Gettier-type problems, not that of vindicating the phenomenon of knowledge *tout court*. Finally, the main problem with reliabilism is that, far from presenting a radically sceptical discussion of the nature of knowledge, it presupposes an empirical-realist conception of it, which is not sufficiently sophisticated and is incompatible with the scheme presented above. This is not a problem concerning reliabilism alone, since interpretations of the process of knowing that aim at solving Gettier-type problems usually work within the following framework:

- i) a knower S is a producer of propositional beliefs
- ii) knowledges consist of a particular kind of propositional beliefs
- iii) then some of S' beliefs may be genuine instances of knowledges
- iv) however, since not all S' beliefs can be supposed to be instances of knowledges, it is necessary to find the right way of selecting only those which can in fact count as real instances of knowledges
- v) the solution can apparently be found by an appeal to the sources of knowledge: beliefs are considered instances of knowledge if and only if they have been correctly obtained from one of those

sources considered *cognitively reliable*.

And such a general scheme is not only in contradiction with the Anti-Cartesian pattern for a philosophy of knowledge presented above, but also debatable in itself under three different headings.

The first problem arises with (v) and can be summarised by quoting Chisholm:

[...] the appeal to such [cognitively reliable] "sources" leaves us with a kind of puzzlement. If the question "How are we to decide in any particular case, whether we know?" is seriously intended, then the following reply will hardly suffice: "An ostensible item of knowledge is genuine if, and only if, it is the product of a properly accredited source of knowledge". For such a reply naturally leads to further questions: "How are we to decide whether an ostensible source of knowledge *is* properly accredited?" and "How are we to decide just what it is that is yielded by a properly accredited source of knowledge?"¹⁷

In other words, any appeal to the nature of a cognitive process aiming at a justificatory role with respect to the status of the extension of knowledge cannot in the long run avoid lapsing into a *petitio principii* or a naturalistic fallacy, since even within the framework provided by the JTB-theory, giving reasons for our beliefs is something altogether different from pointing out their cognitive causes.¹⁸

The second problem concerns the idea of *selection*. The latter has noble ancestors in modern philosophy, particularly in the Cartesian project of selecting the good apples and setting the limits of human knowledge on the right basis. However, as assumed by our objection, it turns out to be strongly misleading. For it lets us believe that there are two stages in the formulation of a particular subject's knowledge,

¹⁷ R. Chisholm, *Theory of Knowledge*, second edition, p.123.

¹⁸ Sometimes, causal theories of knowledge do not distinguish sharply enough between what it means to be "the cause why" and what it means to be "the reason why", on which see K. S. Donnellan, "Reasons and Causes" in P. Edwards (ed.) *The Encyclopaedia of Philosophy* (London: Macmillan, 1967) vol. VII, pp. 85-88 and D. Davidson, "Actions, Reasons and Causes", *The Journal of Philosophy* 60 (1963), reprinted in D. Davidson, *Essays on Action and Events* (Oxford: Oxford U. P., 1980).

such that first he/she produces a set of beliefs (maybe even at random) and only afterwards selects them by applying a sort of “epistemological strainer”, perhaps composed of criteria obtained on the basis of those beliefs that he/she has found most suitable for the task. The Cartesian egocentric style of the *Meditations* has here been misunderstood and altered into a naive form of subjectivism.

This difficulty introduces the last controversial assumption. The idea of selection of mental objects subtly promotes a conception of a knower who appears to be completely transparent to him/herself: the subject has full access to, and total control over his/her beliefs and is absolutely free, in all his/her cognitive steps, to give or withhold his/her assent to a particular content, even at the level of his/her most basic beliefs (see chapter five, § 3.2).¹⁹ This is only a philosophical fiction though, and in order to appreciate how the whole idea of a Cartesian free selection of mental objects, operating on the basis of reliable sources, lacks adequate reasons in its favour, we need only recall what has been argued from chapter two onwards with respect to the fluid state of a knower’s beliefs, a state that has allowed us to rescue the complex collection of Mary’s beliefs from the metaepistemological problem. The connection between beliefs and knowledges is more easily explicable if we consider beliefs as mental attitudes towards, ways of dealing with, or mental capacities of possessing knowledges as epistemic contents, and hence as states that are subject to constant modification, rather than mental objects in themselves, codified and indelibly inscribed in the mind of the subject. To paraphrase Wittgenstein,²⁰ when we know something there are not beliefs going through our minds as well as their cognitive value: beliefs are the way we formulate and possess knowledges. Of course, if the idea of beliefs as S’ mental objects goes, so does that

¹⁹ Quine, for example, seems to share such a view, cf. W. V. O. Quine “The Nature of Natural Knowledge” in S. Guttenplan (ed.) *Mind and Language* (Oxford: Clarendon Press, 1975).

²⁰ L. Wittgenstein, *Philosophical Investigations* (Oxford: Blackwell, 1953), § 329.

of selection in the form seen above.

3.2. *Empirical Subjectivism*

Let me now revert to the Gettier-type problems confronting the definition of knowledge in terms of justified true beliefs. Robert Fogelin²¹ has argued that:

- 1) any Gettier counterexample contains two notions of justification, one *deontic*: if S is justified in believing that p then his/her doxastic behaviour is epistemically responsible; and the other *objective*: if S is justified in believing that p then S believes that p on grounds that establish its truth;
- 2) any Gettier counterexample is constructed on the basis of “a double informational setting”, that is a dichotomy between our omniscient status concerning the situation in which S must make up his/her mind and the limited amount of information that S is provided with. The result is that S does his/her best only in a *deontic sense*, but—from our God’s eye perspective—we can assert that, *objectively*, he/she still fails to grasp the actual reasons behind the truth of his/her belief, hence disclosing no real knowledge of what he/she is talking about;
- 3) theories that seek to solve Gettier counterexamples by working on the deontic sense of justification are bound to accept the previous dichotomy and hence to fail;
- 4) on a purely descriptive basis, a theory that puts enough stress on the objective sense of the notion of justification avoids the “double informational setting” and would represent a successful approach to Gettier counterexamples;
- 5) in so far as our linguistic conventions treat the notion of justification also in the objective sense, we are capable of asserting, cor-

²¹ R. Fogelin, *Pyrrhonian Reflections on Knowledge and Justification* (Oxford: Oxford U. P., 1994), on which see also my review, forthcoming in *The Philosophical Quarterly*).

rectly, that S knows that p whenever p is true and S believes that p for reasons that make p true;

- 6) there is, however, no way in which a theory of justification can prove that S knows that p without begging the question of its own validation.

The previous analysis seems to me perfectly correct and I would only disagree with Fogelin in so far as I would maintain that four more presuppositions should be made explicit, since JTB-theories also tend to presume:

- 7) some strong conception of what knowledge is.

This is obvious if we reflect that in (2) the “double informational setting” works if and only if the judges (usually ourselves), who have to evaluate whether S really knows p in the described circumstances, do in fact *know*, without any doubt but usually without critical awareness of such an indubitability, the proper answer to the justificatory question. The meta-level—whether and how the judges came to know the truth about the specific case in question—is not problematised. This is a version of the approach that Dewey called the spectator theory of knowledge. What does it mean for the judges to know the answer? Do they know what the case is, unlike S, because they cannot be wrong insofar as they are ontologically responsible for the circumstances in which S finds him/herself, that is because the mental experiment has been so conceived by them that they cannot get it wrong? Or are we more naively assuming that they know in some trivial sense of knowing? If the former, then why not concentrate precisely on these more powerful cases of instances of knowledge? Gettier-type counterexamples are much more difficult to envisage when logico-mathematical knowledge is in question, or when the subject S—and not merely the jury that evaluates his/her epistemic behaviour—is also responsible for how things are (think of Conan Doyle and the fact that Holmes has a friend called Watson, how could you “Gettierise” Doyle’s knowledge?). If the latter, then what is the point in carrying on an analysis which is based on such a naive presupposition, apart from performing a scholastic exercise?

At least since Gettier's article, epistemologists working in the area have attempted to

state[s] necessary and sufficient conditions for *someone's knowing a given proposition* [my italics].²²

The result is that JTB-theories attempt to explain not *what* knowledge is as a phenomenon in itself, or *whether* and if so *how* knowledge can be *produced*—this is quite candidly presupposed as unproblematic—but rather whether and how S can claim to know that p, that is whether and how S can become a member of the well-established society of knowers who already know both that p is true and why it is true. How it comes about that such a proposition is given as true is not a matter for discussion. Rather, JTB-theories end by analysing S' requisites for being awarded the title of "knower", or in other words attempt to state necessary and sufficient conditions for assessing S' *claim to know a knowledge*, thus maintaining a Cartesian-Platonist interest in the extensionalist approach to knowledge (*extensionalist Platonism*) with an empiricist-nominalist distrust of purely rational-universal knowledge (*typological nominalism*). This brings us to the further presupposition of

- 8) a semi-Tarskian²³ conception of a true-statement or belief p, such that the latter is assumed as true as long as it corresponds to the state of affairs it describes.

As in the condition of material adequacy stated by Tarsky's theory, the analysis of the epistemic justification of "p" asserts that "p" is true if and only if p, where the left-hand side p belongs to a language and the right-hand side p stands for a fact. In dealing with Gettier-

²² E. L. Gettier, "Is Justified True Belief Knowledge?", *Analysis* 23 (1963), pp. 121-3, reprinted in several collections.

²³ For a clear formulation of reasonable doubts concerning this use of Tarski's theory see S. Haack, *Philosophy of Logics* (Cambridge: Cambridge U. P., 1978), Chap. VII. R. C. Jennings "Is it True What Haack Says about Tarski?", *Philosophy* 62 (1987), pp. 237-243, defends Popper's interpretation of Tarsky's theory as a correspondence theory of truth against Haack's criticism.

type problems by means of an appeal to the process of knowing, we are not concerned at all with the nature of the concept of truth, sharing a common idea of “empirical correspondence”.²⁴ This is odd enough since the concept of “being justified” would quite obviously appear to depend on that of “being true”. As a result, Gettier-type objections to the value of the characterisation of knowledge in terms of true justified belief may end up by supporting the pragmatic paradox whereby it is more rational for S to formulate only a true p rather than a true p plus its possible justification for being true, for in the latter case S could always be wrong (at least in terms of logical possibilities) whereas in the former case S can always be thought to know not only how things are but also why they are so. In other words, according to this general approach, not only can S never be wrong if he/she limits herself to formulating true propositions without justifying them, but S can also always be thought to know their justification as long as he/she does not commit him/herself to any hypothesis concerning their actual justification.

9) a common-sense conception of external reality, thought to be totally independent of S’ knowledge;²⁵ which is based upon

10) a primacy of empirical knowledge with respect to other forms of knowledge.

This sort of nominalist pre-eminence of empirical knowledge, as the first *explanandum* of a longer chain, may be covertly connected with a further, very common conviction, namely that empirical knowledge is the first *explanandum* because empirical knowledge is *the conditio sine qua non* both of any further theoretical knowledge such as mathematical knowledge—which would be more elaborated—and of any other kind of knowledge of other types, such as moral certainty

²⁴ H. Putnam, “Why Reason can’t be Naturalized”, *Synthese* 52 (1982), pp. 3-23.

²⁵ An instance of this assumption is Austin’s assertion that, in the end, what justifies me in asserting that there is a pig in the field is that there is a pig in the field, see J. L. Austin, *Sense and Sensibilia* (Oxford: Clarendon Press, 1962).

of what is right and wrong, or religious intuition about the meaning of life, etc. As a result, we would end up with a sort of characterisation of Philosophy of Empirical Knowledge as First Philosophy of Knowledge.

Altogether, this means that the process of “Gettierisation” is trivial because it is based on the intrinsic and inevitable fallibility of all our empirical beliefs, no matter whether such a feature concerns their truth- or their justificatory value. Since empirical knowledge remains by its very nature always liable to error, attempts to save the tripartite interpretation of knowledge based on other empirical assumptions—including forms of reliabilism—are inevitably bound to fail because of the morphology of the problem they deal with, which is clearly insoluble in principle. It follows that such attempts can only be the result of a naive approach to the nature of knowledge, insufficiently aware both of what the history of the debate about empirical knowledge has achieved and of the phenomenal amount of crucial presuppositions that the tripartite definition requires in order to set-up a pseudo-problem, which is then camouflaged as a particular difficulty to be resolved within what is, allegedly, an otherwise well-organised theory.

To conclude: it is hard to maintain that an approach that gives up the critical task of a philosophical investigation by falling back on the unjustified acceptance of such essential presuppositions could provide any decisive insights into the genesis of the process of knowing, and hence a sufficiently developed theory that could withstand the radical form of scepticism, such as we have encountered in previous chapters, and overcome the metaepistemological challenge by virtue of an indirect approach. The Gettierisation of empirical knowledge remains of very little interest if it is not employed to unhinge a rather naive empiricism underlying the cases of knowledge it is addressed to. This is the lesson to be learnt from Plato’s *Thae-*

tetus.²⁶ Since a gnoseological theory of knowing deals mainly with the possibility of *knowledge*, while a JTB-analysis of knowledge concerns the possibility of *justified empirical beliefs*, theories like reliabilism can be more positively interpreted as bridging the two fields. Their study may provide a gentle introduction to the central questions of a gnoseology. Unfortunately, these days much analytic epistemology is too involved in elaborating forms of subjective empiricism even to consider such an alternative view, with the result that questions concerning the origin of knowledge and its objective nature as an extended domain are left largely unanswered.

4. *Against the Philosophical Role of a Gnoseology*

The reader who has had the patience to follow the present discussion thus far may also have surmised that at the heart of Ob.4 lies Popper's *Epistemology without a Knowing Subject*.²⁷ And indeed, the latter can be interpreted quite rightly as the chief source of the criticism in question, so for this reason alone it is better to test ourselves against it, rather than against any weaker contender. At the same time, however, it is appropriate to spell out, as exactly as possible,

²⁶ For Plato's theory of knowledge see G. Matthews (ed.), *Plato's Epistemology and Related Logical Problems* (London: Faber and Faber, 1972). On the possibility of reading Plato's theory as the first example of analysis of knowledge as JTB (*Thaetetus*) and how this can be reconciled with Plato's theory of recollection (*Meno* and *Phaedo*) see Shope, *The Analysis of Knowing*. There have been several attempts to transform the tripartite definition of knowledge into a "standard account", usually all wanting on the scholarly and interpretative side. On the relevance of the notion of justification in Plato and Aristotle, it may be useful to remark that it was also closely related to a concern for pedagogic aims—to know something also means to be able to teach it—which is completely extraneous to contemporary analyses.

²⁷ K. R. Popper, "Epistemology without a Knowing Subject" in *Objective Knowledge* (Oxford: Oxford U. P., 1972), Chap. III. For a critical discussion of Popper's article see S. Haack, "Epistemology with a Knowing Subject", *Review of Metaphysics* 33 (1979), pp. 309-335.

and before offering any specific comment, why Ob. 4 and Popper's *Epistemology without a Knowing Subject* are alike, but not straightforwardly identical. There are at least four reasons why we cannot simply define Ob.4 as Popper's objection. Let me expound them in order of cogency.

To begin with, Popper's conception of what may count as epistemology is much narrower than the one embraced in the present study. According to him

[...] traditional epistemology, of Locke, Berkeley, Hume and even of Russell, is irrelevant, in a pretty strict sense of the word [...] [and] a large part of contemporary epistemology is irrelevant also. This includes modern *epistemic logic*, if we assume that it aims at a theory of scientific knowledge. However any epistemic logician can easily make himself completely immune from my criticism, simply by making clear that he does not aim at contributing to the *theory of scientific knowledge*.²⁸

Here irrelevant obviously means irrelevant to a theory of scientific knowledge, while epistemology turns out to acquire a twofold nature, being understandable both as *traditional theory of knowledge* and as *theory of scientific knowledge*, that is, to use a less misleading label, as *methodology*. Evidently, epistemology is for Popper to be equated to *methodology* and, since we should take him to be an *epistemologist* in this restricted sense, it becomes altogether unclear whether his work could be of any consequence in this context, where we have been perusing empirical and scientific knowledge regardless of any particular boundary that may be drawn, too often artificially, between the two. On the one hand, it must be acknowledged that the border between the two fields of scientific and empirical knowledge can easily be breached, even inadvertently. What is the difference between the *lower* level of scientific knowledge and the *higher* level of empirical knowledge? After all, it seems to be merely a matter of context whether an assertion such as "if I had enough water I could

²⁸ K. R. Popper, "Epistemology without a Knowing Subject", p.108.

extinguish that flame" will belong to one of these areas of the encyclopaedia or the other. It follows that one could argue that the acceptance of the irrelevance of *traditional theory of knowledge* to the *theory of scientific knowledge* does not imply necessarily the acceptance of the irrelevance of the latter to the former, and hence that Popper's methodology could eventually play a critical role in our metaepistemological (in the sense of epistemology which has been employed here) investigation, by fully supporting Ob.4. On the other hand, the fact that epistemology in Popper's sense may in fact be considered thoroughly irrelevant both to traditional epistemology, and hence to a conspicuous part of the contemporary philosophy of knowledge, is largely confirmed, for example, by the absolute lack of references to methodological questions within the analyses of knowledge as justified true belief.

The second point to be made concerns the orientation of Popper's writings when the dynamics of knowledge is in question. Whenever Popper considers the development of knowledge, he is usually interested only in what was defined in chapter two as the *growing process of the system of knowledges*, i.e. the process and methods whereby the encyclopaedia comes to be shaped, refined and enlarged in virtue of an initial extension of knowledges that is already available. Such an aspect of Popper's thought is intimately connected to a second feature, which can also be introduced immediately, namely his conception of *knowledge* as virtually identical with *information*.²⁹

According to Popper, scientific knowledge is not knowledge in the sense of the ordinary usage of the words "I know". This is a manifestation of what he calls the "World Two" of *subjects* and which he labels *subjectivist*. On the contrary, scientific knowledge belongs to "World Three", that of *objective* theories, objective problems, and objective arguments, "World One" being that of

²⁹ For a similar use of the term "knowledge" as a synonym for "information" in contemporary epistemological studies cf. K. Lehrer, *Knowledge* (Oxford: Clarendon Press, 1974), Chap. I.

physical reality. Popper's conception of objective knowledge seems very close to Sergeant's scholastic "knowledges" discussed in chapter one, where we saw the importance of distinguishing between knowledges as a subject's *cognitiones* and knowledges as *res cognitae*, items of knowledge already formulated, independent of an individual's knowledge and that a knower may or may not come to know. Popper's "World Three" can be seen to consist not only of knowledge as the result of the process of knowing in general, but more precisely only of knowledges of the second and third type, i.e. Hamilton's *res cognitae (notitiae, informationes)* and *scientiae* independent of any single knower. Only if we draw such a distinction can we say, as Popper wishes to say, that libraries represent enormous deposits of knowledges. Somehow this step has been taken by Popper himself:

Knowledge in this objective sense is totally independent of anybody's claim to know; it is also independent of anybody's belief, or disposition to assent; or to assert, or to act. Knowledge in the objective sense is knowledge without a knower [...].³⁰

And Mark Notturmo has suggested that:

Popper's concept of subjectless knowledge is a legitimate use of the word "knowledge". It corresponds to the sense of "knowledge" as *information* or a branch of learning [my emphasis].³¹

Although I am sympathetic to such a view, nevertheless throughout this work I have adopted a slightly more comprehensive perspective. If I have not used *information* instead of knowledges this is precisely because the former can be rather misleading, for it inclines us, sur-

³⁰ K. R. Popper, "Epistemology without a Knowing Subject", p.109, see also his remarks on "knowledge" on p. 110-1.

³¹ M. A. Notturmo, *Objectivity, Rationality and the Third Realm: Justification and the Grounds of Psychologism—A Study of Frege and Popper* (Dordrecht: Martinus Nijhoff Publishers, 1985), p. 153. However, according to S. Haack, Popper's use of the adjectival dichotomy "objective" vs. "subjective" in connection with "knowledge" remains ambiguous, see her "Epistemology with a Knowing Subject", pp. 307-317.

reptitiously, towards certain linguistic uses, while rendering others more difficult. Thus, we are more likely to think that information is *exchanged, communicated, reached, elaborated, stored, recorded, stolen* and the like, using verbs indicating the dynamics of something which is already there, whereas we tend to disregard the fact that it is also *formulated, created, developed, or originated* as well, using verbs which refer to the coming-to-be of an instance of knowledge. Such considerations apply to Popper's concept of knowledge, but not to knowledges. On the contrary, by using the latter term I have tried to emphasise the nature of a *result* distinguishing any established extension of knowledge. On the basis of the historical nature of objective knowledge, I have then argued that there are several distinct senses in which the development of knowledges can be analysed; that the growing process of the encyclopaedia is only one of them; and that it is certainly not the most important, since it is only made possible by the occurrence of a previous relation whose genesis is to be investigated by a gnoseology. Yet for Popper exactly the opposite is the case. Because he conceives knowledge primarily as data or information, the growing process rises to the status of *the process*, and no other epistemic dynamics can be as important. As a result, according to Popper, in so far as traditional epistemology does not flow into some cognitive science, it should be limited to being part of methodology, which investigates knowledge as a purely extensional notion.

We can now turn to the last of my remarks. Admittedly, the two difficulties we have just encountered could be overcome, if with some effort. Strictly speaking, Popper is not in fact speaking of *information* and he does not rule out the possibility of other studies concerning knowledge. This still leaves enough room for a reinterpretation of his position according to standards more acceptable in this context. There is, nevertheless, a last difficulty which cannot be resolved, and finally denies any possibility of interpreting Ob.4 as *Popper's objection*, thus forcing us to refer to it only as an objection *à la Popper*. It is connected with the previous three points, and in

particular with the first, and concerns Popper's attitude towards the concept of *justification*. We have seen how fallibilism utterly disregards, when not radically opposing, any study of knowledge which appeals to the concept of positive justification or of justified knowledge. This is in clear contrast with one of the main goals of this research. As it would be pointless to repeat here the points already made in chapter four, let me just quote another clear passage from Notturmo, an exposition of Popper's anti-psychologism I am very sympathetic to:

Popper's thought seems to be caught in a sort of triangular tension. At one vertex is his deep distrust of authority of any kind. This distrust of authority is what leads to his characterisation of any epistemology which appeals to allegedly infallible sources as subjectivism. And it is this distrust of cognitive sources which results in Popper's anti-justificationism—an anti-justificationism which does not stop with the recognition of fallibilism but extends to a refusal to accept a high degree of corroboration as in any way confirming a theory or establishing it as reliable. For Popper any suggestion that a theory is, in any way, justified even by the most aware and best-intentioned of investigators, leads to authoritarianism. For it encourages the tendency to regard the highly corroborated theory as beyond reproach.³²

Together with the concept of instances of knowledge as consisting of human products, Popper abandons that of justification and this departure from even the minimum features of classic epistemology represents such a major obstacle, in terms of conceptual frameworks, as to become ultimately insuperable. For, as we shall soon see, in order to be possible, a formulation of Ob.4 must share with the hypothesis for the introduction of a gnoseology, as a fundamental branch of philosophy of knowledge, at least the lowest common denominator represented by a conception of knowledge in terms of a thoroughly human phenomenon liable to some sort of defence, no matter how weak. It will be remembered that the proposal in favour of the intro-

³² M. A. Notturmo, *Objectivity, Rationality and the Third Realm: Justification and the Grounds of Psychologism*, pp. 170-171.

duction of a philosophical theory of the genesis of the process of knowing was chiefly motivated by the sceptical challenge concerning the *justification* of a moderately coherentist reconstruction of the system of knowledges constituted by the *historical phenomena* we usually take to be cases of knowledge. But this is exactly what Popper can not concede. His conception of knowledge is radically at variance with what has been assumed here as a minimum starting point, that is the *lingua franca* that allows different philosophies, including scepticism and dogmatism, to enter into dialogue. As a result, in rejecting a conception of knowledge that includes both a historical dimension and at least minimal significance for the notion of justification, Popper has excluded himself from the game that has been played in this book. He cannot be reintroduced in the case of Ob.4.

4.1. *Anti-Psychologism*

We have sufficiently clarified the limited sense in which we can speak of Ob.4 as Popperian. Let us now enter into the morphology of the objection.

Ob.4 starts from the thesis that epistemology studies the nature of objective knowledge only from a logical point of view. It investigates the nature of knowledge within “the logical space of reasons”, to recall Sellars’ phrase. It follows that, for our somewhat Popperian opponent, as for Frege, epistemology has nothing to do with psychology. Any kind of psychological research concerning the nature of the cognitive processes can be happily disregarded, as it describes merely how some knowledge has been produced, while presenting no reasons or counter-arguments for the *corroboration* of this same knowledge. We can note that the irrelevance of the cognitive processes for a correct understanding of the resulting knowledge is perfectly acceptable for scientific or mathematical instances of knowledge, though slightly more puzzling when we come to speak of empirical knowledge—for in the latter case it seems undeniable that

how our cognitive faculties work does matter for a proper understanding of the eventual result since, even without referring to Kant or the psychology of *Gestalt*, it is sufficient to recall that human beings can be deceived by false appearance because, for example, they tend to organise their knowledge of external reality in pre-established frameworks; however, it can also be supposed that our opponent is speaking in terms of epistemological justification of instances of knowledge. In this case, we are not asking whether the object is really as the subject thinks it is, nor are we inquiring whether the epistemic relation between the two involves any modification in the perception of the object. Rather, what we are investigating is the logical organisation of the system of knowledges; whether all members of the set are correct according to our standards of rational correctness; whether they are fully explanatory of their data and so on, perhaps leaving out of consideration even their truth-values and their relation with what is the case. Such an anti-psychologistic position may be *confused* with an argument against the introduction of a gnoseology as the fundamental branch of epistemology. I emphasise “confused” because it is sufficient to recall the distinction between *ratio essendi* and *requisitum* introduced in the previous chapter to make any similar perplexity fade at once. For cognitive psychology studies only those processes which make the presence of some knowledge possible, whereas gnoseology studies the genetic process which is the reason why there is such a thing as the production of knowledge. Thus, in so far as its anti-psychologism is concerned, an epistemology without a knowing subject is not only not in contrast with, but supports the argument in favour of a gnoseological approach in chapter six, where it was stressed that the moderately-coherentist reconstruction of the system of extension and criteria of knowledge cannot be anchored by a psychological investigation without committing a naturalistic fallacy. Were the Popperian objection only a version of anti-psychologism, there would be no need to dwell upon it any further. But on the basis of its anti-psychologism, Ob.4 may lead to the further consequence that a phi-

losophy of knowledge is to be identified with epistemology *tout court*, and it is this last thesis which, of course, works against the philosophical role of a gnoseology.

4.2. *Anti-Gnoseologism*

The thesis that philosophy of knowledge and epistemology are one and the same is supported by a previous implicit assumption, viz. that knowledge at its best is scientific knowledge. From this assumption—which should be contrasted with that shared by JTB-theories with respect to empirical knowledge—the objection infers that, even if there could certainly be other disciplines investigating the nature of knowledge, epistemology as the logical study of scientific knowledges would still be our *first philosophy of knowledge*. That there is no need for a gnoseological support of such a discipline follows—according to Ob.4—from the fact that the extension of knowledge, the encyclopaedia, is overall *autonomous or independent* (I shall turn in a moment to this misleading “or”) of the knowing subject. Almost like a body put in motion(?), once it has been created or produced the system of knowledges takes its own independent steps and only the dynamics of the latter is a topic worthy of epistemological investigation, not its subjective roots. At this point, there are many metaphors to which our Popperian opponent can appeal in order to explain his position. As Popper himself suggests

One of the main reasons for the mistaken subjective approach to knowledge is the feeling that a book is nothing without a reader; only if it is understood does it really become a book; otherwise it is just paper with blank spots on it. This view is mistaken in many ways. [...] [A] book remains a book—a certain type of product—even if it is never read.³³

Apparently, objective knowledges could be treated like books, which are still books even if there is nobody to read them, or they could be

³³ K. R. Popper, “Epistemology without a Knowing Subject”, p. 115.

compared to the output of a certain computer programme, which produces results that may never be used but would still represent knowledge. There is no need to anchor any system of knowledges to any genetic discipline, simply because the encyclopaedia can stand independently from its origin onwards. And if the genesis of the process of knowing is irrelevant as a supporting explanation of knowledges, so is a gnoseology compared to epistemology. By this argument, Ob.4 does not mean to deny any significance to a gnoseological study. It just restricts it to a context which is proclaimed irrelevant to the logical study of the nature of objective knowledge.

At this point, the thesis of Ob.4 can be summarised in the following steps:

- i) knowledges are autonomous or independent from S' process of knowing; then
- ii) a study of the nature of knowledges is autonomous or independent from a study of the nature of S' process of knowing; but
- iii) since epistemology is the study of the nature of knowledges, then
- iv) epistemology is autonomous or independent from any other study of the process of knowing.

There are several problems concerning the "identity" thesis supported by Ob.4, some possibly due to simple terminological misuses, some to the analogical arguments and still others to a conceptual confusion. The only correct passage in the whole reasoning is the least significant, that is (iv). This is also the only assertion which can be shared, in a sense which will be specified below, by the scheme introduced at the beginning of this chapter. The problem with (i) is that it does not distinguish between the two concepts of *autonomy* and *independence*. The distinction was introduced in the second chapter, but it may be worth expanding it here. A is *independent* from B when A would exist even if B had never occurred or existed. Mary is independent from John because her life is possible without John (despite what she says to him); likewise, Great Britain is independent from the EU because it was there before the EU was created.

This rather simple concept of *ontological independence*³⁴ should not be confused with a different concept we encounter when dealing with a special interpretation of B, that is when B is *the origin of A*. Avoiding a more misleading expression like *empirical independence*, in this case we should rather speak of the *autonomy* of A from B, and no longer of its *ontological independence*. For the concept of autonomy indicates A's possibility of following its own directions in its development or life—something autonomous is something which is its own legislator—and this at a pragmatic or empirical level, not at the level of existence. So, strictly speaking, it follows that a house, for example, once built is *autonomous* with respect to its builders, but it is not *ontologically independent* from them since, in so far as its “coming to be” is concerned, it would not exist if it was not for them. Likewise, Mary is independent from her boyfriend but only autonomous with respect to her mother, while the EU is autonomous from Great Britain but we should not say that it is also independent from it. The same can be said about books, computer programmes and the encyclopaedia in general. It is already debatable that a book is a book even if there was not, is not, or never will be a reader. The notion of “book” as that of “a knowledge” is understandable only in conjunction with that of a reader or a knower. If we are without the second term, the first could stand for anything. Perhaps, then, we could also say that ashes are books, although we cannot imagine the reader who is going to interpret them. But suppose we were to concede this much to our Popperian opponent. The surprising fact remains that post-Cartesian epistemology *does not* interpret the relation *knower-knowledges*—note, not *knower-reality*, which reminds us of Galileo's “book of nature” written in mathematical sym-

³⁴ Of course the issue is more complex. For example, in a metaphysics such as Spinoza's it would not be acceptable to assume that there is anything really *independent* from anything else, except the whole set of everything, or the divine substance, which is independent because there is nothing beyond it to depend upon. Yet in the text I am not referring to such extreme positions of *absolute independence*.

bols—as that of *reader-book*, but rather as that of *writer-book*. We may play analogically with the pair book/reader to state the necessity of analysing the book without taking into account the reader, but we cannot say that books are what they are even if there are no authors. Popper himself seems to be aware of this difficulty, because immediately after the quotation given above he starts talking about the possibility of there being no books without writers. He objects that in fact there may be such books, as there are data produced by computers somehow developing programmes independently. But the reply is not very satisfactory: who has programmed these computers? Where do these never-known-by-any-knower knowledges come from? Traditional epistemology may be too subjectivist, but it is not very easy to state meaningfully what in fact would count as subjectless objective knowledges, unless what our Popperian opponent has in mind is some kind of independence of knowledges from the individual subject. But this reasonable position, according to which the encyclopaedia transcends each singular knower, does not seem to be Popper's own. If it were, in the context of Popper's analysis it would scarcely be interesting. It is obvious that epistemology is concerned with human knowledge, not with a specific human knowing subject's knowledge.

Once the equation “subject: knowledge = writer: book” is correctly stated, we can apply the distinction autonomous/independent and realise that knowledges as well as the contents of books are autonomous from their authors, so much so that after a certain number of years the latter lose their copyright, but they can never be ontologically independent from their authors. The greatness of the *Critique of Pure Reason* is not that it was a book which someone would have written sooner or later, but that if it was not for Kant we would not have it, and someone had to write it.³⁵ In confusing *onto-*

³⁵ Note that, from the perspective of epistemological deontology, certain naive forms of Platonism can be exceedingly reassuring about the future. If not us now, then someone else in the future will discover the solutions al-

logical independence with *pragmatic autonomy*, clause (i) also disregards the difference between *ratio essendi* and *requisitum*. To take the example of the *Critique* again, the fact that Kant materially thought and wrote the *Critique* is its *ratio essendi*, but there are different *requisita* for the appearance of such a text at that time, such as the French Enlightenment, Newton's Physics or Hume's criticism of causality. Since he misses the former distinction, our Popperian opponent cannot even make clear the difference between the two roots of such dependence.

From the confusion present in (i), there follows a worst misunderstanding in (ii). For (ii) should have only an anti-psychologistic import, which we have seen to be perfectly compatible with a gnoseological investigation, while in fact it also sounds definitively anti-gnoseological. This is due to the fact that (ii) adds to the previous confusion between independence and autonomy a further one. By speaking of S' process of knowing, (ii) does not distinguish between the genesis of knowledge in terms of what takes place within a knower, i.e. the genesis of knowledge in virtue of the cognitive processes, and the genesis of the relation between subject and object which then leads the former to attempt an epistemic account of the latter, i.e. the genesis of the process of knowing. I do not know whether we should concede to Ob.4 that the study of the nature of knowledge is autonomous *and* independent from the study of human cognitive processes. After all, if the only acceptable items that may populate "World Three" are knowledges and their by-products, but there are no justificatory tasks in view, why should more descriptive disciplines like economy, sociology or psychology not investigate it instead of epistemology? Machlup's studies, mentioned in chapter one, are an example. Perhaps a reply may be that the other various elements that, according to Popper, inhabit "World Three", like false theories, problems, conjectures, states of a discussion and of critical

ready present in the world of ideas or in "World Three". Responsibilities can be postponed.

arguments etc., require special attention from epistemology. Or maybe a better answer could be that economy and sociology study the nature of the realm of knowledges “historically”, while epistemology concentrates on its logical nature and development, with a concern for a *negative* normative analysis (falsificationism). However this may be, if “World Three” is populated by knowledges, it is still unclear why the investigation of the cognitive sources of these knowledges is irrelevant to an explanation of their nature and destiny. But even if we were to concede that the study of objective knowledge is autonomous and independent from the study of human cognitive processes, it would still follow, from what has been said in previous chapters, that the same study is autonomous but *not* independent from a gnoseology. As a consequence, in order to give a full explanation of knowledge which does not beg the question, it is not enough to investigate its logical nature as a set of conjectures—as our Popperian opponent would invite us to do— but it is of vital importance to explain why there is such a thing as human knowledge, and hence an initial extension of the encyclopaedia which is sufficient to make possible our following epistemological analysis. In the end, I would agree with (iii) when it stresses the importance of epistemology as the study of subjectless knowledges and their autonomous development. But I would also argue that this tenet should be given a meaning somewhat different from the one endorsed by our opponent. For we should infer from it not merely that (iv) but rather that, precisely because epistemology can be the autonomous study of the nature of the system of objective knowledges, it is dependent upon, and therefore must also be supported by, a previous gnoseological investigation. We may have an epistemology without a knowing subject (anti-psychologism) but we cannot have a complete philosophy of knowledge without a gnoseological theory of the genesis of the process of knowing.

Let me now conclude this section on a slightly more positive note. Once Popper’s “World Three” is interpreted as “the world of the encyclopaedia”, his treatment of it gives rise to feelings of regret. On

the one hand, it is undeniable that in epistemology we have no choice but to start from the obvious fact that, in the long run, the genesis of knowledges depends on the presence of actual, historical knowers, without whom there would be no knowledge at all. This is to say that, in the process of knowing, the cognitive activities of a knower are a *conditio sine qua non* for the emergence of knowledges. It may be that there are many knowledges that nowadays are not known by anybody. We have only to think of the many archives and libraries in the world. Yet, there is no single knowledge stored somewhere at time t_x which does not depend more or less directly on the human mind and its activities for its formulation at time t_{x-1} . In this sense, knowledge is a thoroughly historical phenomenon (i.e. due to the presence of human beings on the earth). On the other hand, we may regret that Popper has not analysed the similarities between “World One” and “World Three”. The increasing accumulation of knowledge throughout human history is such, and the pressure of “the world of knowledges” on individuals is so high, that it would have been interesting if Popper had developed his theory of “World Three” in the direction of interpreting knowledges as somewhat crystallised mental components of external reality, another ingredient of the external world with which each of us, as an *individual mind*, has to deal, as a fundamental, although more human, constituent of the environment within which we need to lead our lives and adapt ourselves. But Popper does not acknowledge that “World Three” requires an ontological investigation—what I called at the end of the last chapter a *negative ontology of knowledge*—as much as “World One” does and so, while stressing the fact that

we are workers who are adding to the growth of objective knowledge as masons work on a cathedral³⁶

he does not admit the importance of questions about the need for such a cathedral, its functions, its scope and its history as the habitat of the mind.

³⁶ K. R. Popper, “Epistemology without a Knowing Subject”, p. 121.

5. *Against the Philosophical Value of a Gnoseology*

While Ob.4 has shown a tendency to rely on Popper's correct defence of the importance of an investigation of the encyclopaedia in terms of subjectless knowledge, the formulation of Ob.5 takes a completely different route.

According to Ob.5, the study of knowledge can be carried on in two ways:

- a) the analysis of knowledge, of what it means to say that S knows that p, of how a set of known propositions is to be organised and justified, in short any discussion of knowledge as the result of the process of knowing, belongs to the logico-philosophical field, in particular to epistemology;
- b) the study of the process of knowing, the description of the cognitive capacities involved in the formulation of knowledge, in short any discussion concerning the diachronic "coming to be" of some knowledge, belongs to the psychological field, or more generally to some cognitive science.

Following this rough distinction, Ob.5 argues that

- c) a study of the genesis of the process of knowing can either be brought under the jurisdiction of some cognitive science or is totally negligible for the understanding of knowledge in general. In either case, such a study does not belong to any philosophical area.

Different positions may be recognised in this objection, some of which seem to be very much keener on supporting a fashionable way of dealing cognitively with epistemological issues than on following a genuinely justifiable stream of theoretical reasons.³⁷ The origin of

³⁷ For this trend see S. Haack's discussion of S. Stich, *From Folk Psychology to Cognitive Science—The Case against Belief* (Cambridge, Mass.: MIT Press, 1983); of Pat. Churchland, "Epistemology in the Age of Neuroscience", *Journal of Philosophy* 84 (1987), pp. 544-53; and of Paul Churchland, *Scientific Realism and the Plasticity of Mind* (Cambridge:

such a movement, though obviously not responsibility for its mischiefs, is usually traced to Quine's proposal for a naturalised epistemology.³⁸ And it is precisely to a position à la Quine that Ob.5 can

Cambridge U. P., 1979) in her "Recent Obituaries of Epistemology", *American Philosophical Quarterly* (1990). and now in *Evidence and Inquiry*.

³⁸ See W. V. O. Quine, "Epistemology Naturalized" in *Ontological Relativity* (New York: Columbia U. P., 1969), pp. 68-90; *The Roots of Reference* (LaSalle Ill.: Open Court, 1973) and "The Nature of Natural Knowledge" in S. Guttenplan (ed.) *Mind and Language*. Favourable discussions of Quine's proposal include B. Barnes, *Scientific Knowledge and Sociological Theory* (London: Routledge and Kegan Paul, 1974) and N. Barnes and D. Bloor, "Relativism, Rationalism and the Sociology of Knowledge" in M. Hollis and S. Lukes (eds.), *Rationality and Relativism* (Oxford: Blackwell, 1982). More recently J. Maffie in "Recent Work on Naturalized Epistemology", *American Philosophical Quarterly* (1990), pp. 281-293, has discussed the various forms of continuity between cognitive sciences and epistemology (from contextual to semantic, from epistemological to metaphysical and axiological), defending, against Goldman, Sosa and Kim a radical naturalisation of epistemology which does not leave even the meta-epistemological level of discussion methodologically autonomous from science. Influential criticisms include H. Putnam, "Why Reason can't be Naturalized" and B. Stroud, "The Significance of Naturalized Epistemology", in P. A. French, T. E. Uehling and H. K. Wettstein (eds.), *Midwest Studies in Philosophy VI: The Foundations of Analytic Philosophy* (The University of Minnesota Press, 1981), pp. 455-471, revised in *The Significance of Philosophical Scepticism* (Oxford: Clarendon Press, 1984). Stroud's critique bears a particular significance in this context, as he has clearly shown the limits of Quine's proposal as a final answer to the sceptical challenge, but see also W. V. O. Quine, "Reply to Stroud", published in the same collection, pp. 473-5, R. F. Gibson, "Stroud on Naturalized Epistemology", *Metaphilosophy* 20 (1989), pp. 1-11 and more generally the latter's *Enlightened Empiricism: an Examination of W. V. Quine's Theory of Knowledge* (Gainesville: University Press of Florida, 1988). For a more recent introduction to the topic see J. Kim, "What is 'Naturalized Epistemology?'" in J. E. Tomberlin (ed.), *Philosophical Perspectives—2 Epistemology* (Atascadero CA: Ridgeview P.C., 1988), Chap. XII. R. Rorty, in *Philosophy and the Mirror of Nature* (Princeton N. J.: Princeton U. P., 1980), has drawn from Quine's proposal much more radical conclusions, ending with a denial of the value of any philosophical theorisation about knowledge.

appeal in order to gain some assistance, although, as in Popper's case, it is important to make clear at the outset why Quine's proposal would not be immediately suitable for the role of an anti-gnoseological opponent. We would have to make fairly substantial modifications to the proposal before it could take on such a role, and there are at least three good reasons which should prevent us from doing so:

- Firstly, Quine seems generally keen on speaking of epistemology *more* in terms of philosophy of science than in terms of philosophy of knowledge, i.e. an *Erkenntnistheorie*.³⁹ So it is not clear to what extent his arguments may be directly addressed against the metatheoretical scheme introduced at the beginning of this chapter.
- Secondly, Quine supposes that the (over-ambitious) task of a philosophical theory of knowledge is that of providing an ultimate foundation of knowledge, which may then justify the value and reliability of science. For Quine, this type of foundationalism maintains that philosophical knowledge would be *deeper* or *more fundamental* than any other scientific knowledge, since only the former could assign theoretical value to the latter, playing the role of an *arbiter scientiarum*. Quine coherently—and I think definitely with good reasons⁴⁰—argues against the tenability of such a view nowadays. Of the many different senses in which we speak

³⁹ I specify “more” because in “Epistemology Naturalized” Quine first writes that “Epistemology is concerned with the foundations of science” and in particular with the study of the foundations of mathematics, but later he concentrates on the “epistemology of natural knowledge”, turning to discuss the traditional tasks of a theory of knowledge such as Hume's, cf. also Quine “The Nature of Natural Knowledge” in S. Guttenplan (ed.) *Mind and Language*.

⁴⁰ On the different senses in which it is possible to speak of foundationalism see W. P. Alston, “Two Types of Foundationalism”, *The Journal of Philosophy* 73 (1976), pp. 165-185; D. Christie, “Contemporary ‘Foundationalism’ and the Death of Epistemology”, *Metaphilosophy* 20 (1989), pp. 114-126.

of “foundationalism”, we now certainly tend to abandon that of “the search for an unshakeable philosophical justification of any branch of human knowledge”, which, of course, was to a large extent what Descartes or Kant were aiming at. It is undeniable that in the past many philosophical theories of knowledge shared such an ambitious project, but this is not the task of a theory of knowledge as it has been outlined here, which seeks a more modest vindication.

- Finally, Quine’s proposal seems to be that (more radical) of abandoning any philosophical theory of knowledge in favour of a psychological theory of knowledge, not just that of eliminating the study of the genesis of the process of knowing from the philosophical field and attributing it to psychology.⁴¹

However, it is still true that, in search of theoretical support, our opponent could certainly make profitable use of Quine’s naturalised epistemology. After all, the latter amounts precisely to what has been called above a scheme for a theory of knowledge⁴² and as such it could be brought into play as an alternative metaepistemological approach to the one advocated in our investigation. For this reason, we may decide to describe Ob.5 as an objection *à la Quine*. So let us now see how our Quinean opponent can reinforce his argument.⁴³

⁴¹ It is not clear how Quine conceives his own metaepistemological work of devaluing the role of classic epistemology, whether as the last task left to a philosophical reflection upon knowledge or as already an expression of scientific knowledge *tout court*.

⁴² Quine himself refers to the work of other authors when he feels the necessity of saying what the contents of a naturalised epistemology might be. Piaget’s cognitive psychology and Campbell’s evolutionary epistemology seem to be the classic candidates for such a role.

⁴³ For criticisms of Quine’s project for a naturalised epistemology, besides those already mentioned above, see also J. P. Dancy, *An Introduction to Contemporary Epistemology*, pp. 233-239; M. J. Cresswell, “Can Epistemology be Naturalized?”, in R. W. Shahan and C. Swoyer (eds.), *Essays on the Philosophy of W. V. Quine* (Brighton: The Harvester Press, 1979), pp. 109-118; and the debate between J. Levine A. Shimony and J. Agassi in A.

On the basis of what has been said in previous chapters, the reader will recall that a gnoseology belongs to a philosophical context in so far as:

- 1) It studies the possible genesis of the process of knowing, while at the same time disregarding, as irrelevant, the task of giving a description of the cognitive behaviour of an ideal human being. Rather, a gnoseology attempts to explain why there is such a thing as an epistemic relation ($\mathfrak{R}$) occurring between a Subject (S) and an Object (O) of knowledge, that is why ($\mathfrak{R}$ (S,O)) occurs.
- 2) In carrying out the research sketched in (1), a gnoseology discusses the most radical questions that can be asked about the nature of knowledge, thus accepting the sceptical challenge as the only correct guide to the investigation of the nature of knowledge.
- 3) In connection with (1) and (2), a gnoseology tries to vindicate both the occurrence and the nature of the system of knowledges. The elaboration of a gnoseology is an attempt to solve the meta-epistemological problem undermining the stability of the encyclopaedia. This goal is pursued by presenting a twofold vindication of the genesis and the nature of at least part of the encyclopaedia, by means of gnoseological interpretation of the demand for knowledge.
- 4) In any other case, the study of the process of knowing with regard to digital, neurological or psycho-physical aspects belongs to cognitive sciences.

I have summarised this set of conditions by saying that a gnoseology is supposed to produce an answer to two questions: why is there a demand for knowledge promoting an epistemic relation between mind and reality, and how does the production of knowledge satisfy such a demand?.

Shimony and D. Nails (eds.), *Naturalistic Epistemology—A Symposium of Two Decades* (Dordrecht: Reidel, 1987). In general, it seems that Quine's proposal has had more success as a starting point for a further philosophical debate than as a project for a scientific programme of research, but see note 45 below.

In order to support the reduction of a gnoseological investigation of the genesis of the process of knowing to the jurisdiction of cognitive sciences, our Quinean opponent must now argue that 1-3 are theoretical requests, which can either be more or less easily satisfied by a study of the process of knowing conducted within a cognitive science, or are not justified at all. Correspondingly, the two gnoseological tasks—the vindication both of the genesis and of the nature of the encyclopaedia—when not utterly meaningless are either irrelevant, or not a matter of gnoseological investigation at all, but simply scientific topics, which must be reducible to the domain of investigation of a cognitive science. As a result, the whole objection à la Quine to the philosophical value of a gnoseology consists of a twofold reductive manoeuvre. I am convinced that the whole strategy is unsuccessful and that Ob.5 fails in its attempts either to eliminate gnoseology or to reduce it to a cognitive science. In order to corroborate my claim, I shall discuss each stage of the attack separately.

5.1. Naturalised Gnoseology?

The Quinean opponent may first try to show that any result achieved by a gnoseological study can simply be reinterpreted in cognitivist terms. A gnoseology, if it is of any importance, can only be part of a cognitive science. Such a reductionist strategy meets with two distinct difficulties:

- one is the difference between the nature of a philosophical investigation and the nature of a cognitive investigation, already examined in chapter one;
- the other is represented by a version of the Scyllas/Charybdis situation, already examined in chapter six.

Only the former can perhaps be partially solved. Since both difficulties have already been discussed at some length, let me summarise them as briefly as possible.

Although it is indisputable that psychology, for example, can elaborate abstract models explaining the process of knowing and that

these models can be made to refer to an ideal knowing subject S, it is also equally evident that any rational reconstruction of the process of knowing provided by a cognitive science is oriented towards understanding the cognitive activity of a natural or artificial knower. If a cognitive science were then interested in investigating *the genesis* of the process of knowing, its discussion of the topic would still be “humanistically” or “historically” oriented, that is it would be concerned essentially with a better understanding of human psychological attitudes. This has also been the “anthropocentric” fate of most work done in artificial intelligence. The point is not that a cognitive science like psychology cannot be forced to look as abstract and non-empirical as a philosophy of knowledge but that, in so doing, that science loses its most characteristic features. Any psychologist can philosophise provided that he recognises that he is overstepping the boundaries of his discipline.⁴⁴

For the sake of our present investigation, however, let us assume that a cognitive science is indeed capable of giving a detailed and satisfactory account of the genesis of the processes in terms of a logical reconstruction of the genesis of S’ psycho-physical cognitive activities. What this would entail? Would it mean that an exhaustive description of the genesis and the nature of S’ cognitive processes gives an answer to our philosophical questions about why there is an initial epistemic relation between mind and being? Would, in other words, a naturalised gnoseology be capable of vindicating the genesis and the nature of the encyclopaedia? We know the reply must be in the negative. Such an approach is either shipwrecked on the Scylla of a *naturalistic fallacy* or in the Charybdis of a *petitio principii*. It was so at the level of the study of the metaepistemological problem, and it is still largely so at the level of the disciplines such a study

⁴⁴ For example, in the second edition of the *Dictionary of Psychology*, edited by S. Sutherland (London: Macmillan, 1995), all entries concerning knowledge have a philosophical nature, and the *Encyclopaedia of Psychology* edited by R. J. Corsini in 4 vols. (Toronto: John Wiley and Sons, 1984), does not have the entry “knowledge” at all, but only one for “cognition”.

belongs to. Let me just expound in what aspects the present situation differs..

Our Quinean opponent might wish to argue that, precisely in order to deal with the two pseudo-gnoseological questions, a naturalised gnoseology is to be conceived as consisting of two branches:

- a *psychological-genetic epistemology*, say one à la Piaget, which would deal with the vindication of the nature of the encyclopaedia; and
- an *evolutionary epistemology*, say one à la Campbell, which would deal with the vindication of the existence of the encyclopaedia.

The problem becomes, then, whether these two disciplines, or any study so oriented, can really cover the same area investigated by a philosophical gnoseology with a similar degree of success.

Genetic epistemology does not provide an answer to the question why the mind relates to reality epistemically. All genetic epistemology can do is to examine what happens once the mind has already started to have such a relation. It is significant that such studies are mainly concerned with the development of cognitive processes in children. Their chief interest lies in the history of cognition from the first appearance of a cognitive process onwards, whereas a philosophical gnoseology tries to reconstruct what happens in the passage from the proto-mind to the mind. Its hypothesis about the genesis of the process of knowing reaches as far as the first appearance of some sort of cognitive activity and stops there, giving way to other studies, philosophical or scientific as they may be. Genetic epistemology is not interested in what comes before, or in what prompts the creation of, any epistemic relation between the subject and the object. On the contrary, it describes the development of cognitive processes, disregarding the process that has lead an ideal S to start having cognitive processes at all. But if this is really so, then we already know that such a study cannot produce a validation of the nature of the encyclopaedia either. In attempting to fulfil only this second half of the task of an allegedly naturalised gnoseology, genetic epistemology is

supposed to explain the nature of the outcome of the epistemic relation by means of an interpretation of the *requisita* for the occurrence of objective knowledge, but since its approach is not sufficiently radical, it lapses into the naturalistic fallacy. In order to remain sound, its approach can only be descriptive, never normative or justificatory even in a weak sense of the words,⁴⁵ but then it can never fulfil the task of *vindicating* the nature of human knowledge. As Putnam has argued, naturalised epistemology erroneously eliminates the normative.⁴⁶

Evolutionary epistemology, on the other hand, seems to perform its task slightly more successfully, for it does appear to give a scientific explanation of why there is such a phenomenon as human knowledge, by referring to a scientific theory of natural evolution, say one à la Darwin. In so doing, evolutionary epistemology leaves aside the question of the nature of the encyclopaedia—which, as we have seen, is left unanswered by genetic epistemology as well—but at least it seems to present an interesting answer to the genetic question. And yet, evolutionary epistemology does not solve the difficulties we encountered when studying the metaepistemological problem, for it obviously starts from the assumption that a specific scientific theory of evolution is indeed the correct set of knowledges from which to elaborate further criteria to investigate the nature of knowledge itself. Evolutionary epistemology commits the error of assuming the value of a certain extension of scientific knowledge in order to investigate the nature of knowledge itself. It is the usual problem of a *petitio principii*.

To sum up, both branches of a naturalised gnoseology suffer from the same problem in the Quinean scheme, for they are permeated by too many scientific presuppositions to be reliable ways of vindicat-

⁴⁵ For this reason, I suppose, Goldman's genetic and descriptive approach has been often associated with Quine's naturalised epistemology, see H. Kornblith (ed.), *Naturalizing Epistemology* (Cambridge Mass.: MIT Press, 1985).

⁴⁶ H. Putnam, "Why Reason can't be Naturalized", pp. 20-21.

ing the occurrence and the nature of the encyclopaedia in a non-fallacious way. From the point of view adopted in our present investigation, the chief problem with a naturalised gnoseology is that

- its *genetic branch is not radical enough* (i.e. is not *philosophical enough*, in a positive sense of “philosophical”), for it does not investigate the question of how the mind comes to have an epistemic relation with reality deeply enough;
- while its *evolutionary branch is too theoretical* (i.e. *too philosophical* in a negative sense of “philosophical”) for it takes for granted precisely those epistemic steps which a philosophical gnoseology needs to and tries to avoid, that is it assumes a certain set of potential knowledges as already genuine instances of knowledge.

Cresswell has summarised the situation very neatly:

What the naturalized epistemology tells us is that, *provided we are working with the true theory*, it is simply matter of empirical psychology [...] to decide what sorts of things human beings can know and what is the relation between sensory stimulation and the production of descriptions of the world. What it *does not* tell us is what counts as being the true theory in the first place, or how, in any absolute sense, we may come to know which theory is the true one. [p.111] [...] The only point that I want to insist on is that naturalized epistemology, however indispensable its methods may be, and however superior to traditional procedures in the theory of knowledge, is dependent upon, and not a substitute for, a metaphysical justification.⁴⁷

Let us turn then to the second strategy that the Quine-like objection can deploy against the value of a philosophical gnoseology.

5.2. Neurath's Metaphor: Between Shipwreck and Refurbishing

In reply to the problem of the fallacious alternatives that face the first strategy for reducing gnoseology to a cognitive science, our opponent might argue that, in so far as a naturalised gnoseology does

⁴⁷ M. J. Cresswell “Can Epistemology be Naturalized?”, p.117.

not answer the old gnoseological questions, this is because the latter are theoretically insignificant and therefore negligible. This part of the reductive manoeuvre evidently concerns the significance of the sceptical challenge. In order to justify the proven inability of his naturalised gnoseology to deal with the most radical genetic questions, our Quinean opponent might go on to maintain that questions about the nature of knowledge are legitimate only in as much as they can be answered by a scientific approach, that is within a set of potential knowledges already established as genuine instances of knowledge. Faced with the undeniable insufficiency of his approach, the best he can do is to appeal to the impossibility of formulating further questions about knowledge that do not deceptively overstep—according to him—the borders of what it is still meaningful to ask. Seeing that he cannot resolve the gnoseological questions with his answers, he tailors the questions to the answers that he believes himself able to give.⁴⁸ The negative part of his manoeuvre consists, firstly, in denying that any question about the nature of knowledge is possible beyond those answered by some cognitive science and, secondly, in considering the latter as *internal* questions, that is questions made possible by the presence of some extension of knowledge that has already been formulated. The next step, then, is to link this internally reductive interpretation of the sceptical questions to some positive re-interpretation of the vicious circle occurring between extension and criteria. To this end, the Quinean opponent may employ a *holistic version* of the moderately-coherentist reconstruction of the system of knowledges. Either the system of extension and criteria—which he considers to form the web of the encyclopaedia—goes or

⁴⁸ Quine distinguishes between logical and empirical doubts about knowledge, accepting only the latter as real epistemological issues and, accordingly, the only ones which can be answered by a naturalised epistemology. A sceptical question such as “how does S know that he/she is not a brain in a vat, stimulated by a computer?” is not considered sufficiently empirical, and this explains its not being answerable in terms of a scientific description of S’ cognitive relations to external reality.

does not go, if not all together, at least in great blocks. We can decide to abandon one area of the web or to substitute it for another, but always maintain a position *internal* to our established web of knowledge. There is no way of escaping totally and radically from our familiar epistemic assumptions. We must work within the encyclopaedia, not from without. The sceptical questioning is no longer problematic, for it is dismissed as simply an overreaction to the problems caused by our scientific research. Using Neurath's famous metaphor, our Quinean opponent will finally argue that all a naturalised gnoseology can do is to help the other naturalised once-philosophical disciplines "to repair the ship while sailing on the water".

Unfortunately, the whole train of reasoning utterly misunderstands the crucial role played by the sceptical doubts, as it fails to grasp the fundamental productivity of the critical method, which lies in resolutely pursuing and disputing, step by step, all our assumptions, as radically as possible. Quine's holistic approach must deny precisely the logical fact expounded in chapter five (see § 3.1), namely that the sceptic may undermine a theory completely from within, by gradually and systematically putting into question all its constitutive parts. According to him, the sceptic cannot adopt an external point of view from which to unhinge the whole body of our knowledge, for he is on Neurath's raft together with the scientist—and so far he is right—but we have seen that the sceptical challenge does not have to be global and external in order to be thoroughly destructive: it can be a sequential and internal overthrow of the entire extension of the system of knowledges.⁴⁹ In the *First Meditation*, for example, Descartes constructs the hyperbolic doubt by first organising the infinite set of his beliefs into a finite number of classes of beliefs, which can then be challenged (the classes, not just their members) in a progressive, but also finite and complete, number of stages of critical examination. The point is not merely that it is really

⁴⁹ See B. Stroud, *The Significance of Philosophical Scepticism*.

difficult to stop the development of the sceptical questions, but that disregarding their importance amounts to abandoning the philosophical task of a fundamental inquiry into the nature of knowledge. Seemingly, in order to defend the value of a gnoseology as an essential philosophical discipline it is necessary to argue for the value both of the old-style sceptical questions concerning the nature of knowledge, and of a philosophical gnoseology as the discipline which can deal with these questions. This double task can be accomplished by making two observations about Neurath's metaphor.

The first observation is thoroughly negative and relies on what has been already said in the last two chapters. By presenting Neurath's metaphor as anti-sceptical, our opponent shows merely how little he has understood the nature of sceptical criticism. We only need recall the kamikaze saboteur who tries to sink the raft, drowning with all the other members of the crew (see chapter five, § 3.1). What needs to be added here is the recognition that, if the meta-epistemological challenge is a powerful, internal attack moved against the possibility of a theory of knowledge, then a gnoseological reply must be understood as an internal answer to such an attack. This much is clear from the fact that a gnoseology starts from a certain extension of knowledge and ascends from this to its origins. And we must remind our opponent of this, for according to him gnoseology is an unsuccessful attempt to escape from the web of our beliefs or from the raft precisely in order to assume an alleged Archimedean point of view, from which to start a foundationalist analysis (in the Quinean sense of the word explained above) of the origins of our epistemic relation with external reality. Is gnoseology really assuming a God's eye approach in investigating the genesis of the process of knowing? Is it trying to escape completely from the encyclopaedia in order to provide a vindication of its origin and nature from without? The answer is obviously in the negative, for we are still working within the "web of our beliefs". The point is that a gnoseology does not merely run within the circle of the system of knowledges, going from extension to criteria and vice versa. What a gnoseology at-

tempts to do is to go transcendently back up to the *ratio essendi* of the whole circle. If the web of our beliefs is a labyrinth which we are within—and outside which we shall never be able to place ourselves, nor be allowed to think we may do so—then a philosophical gnoseology can be imagined to cope with its task not by assuming an unjustified external approach—in this the Quinean opponent is right—but by rolling up Ariadne's epistemic strand, a crucial point missed by the former. Indeed, were the terminology not misleading, we could say that a philosophical gnoseology reconstructs the origin of knowledge from an *introspective* point of view, that is by looking to the genesis of the process of knowing *internally*. By following the sceptical questions in a radical way, we may be able to reach the starting point from which we begun the enterprise of dealing with reality by means of knowledge. Since we cannot cross the last threshold of the labyrinth, we are and will always remain within our system of knowledges, but what the labyrinth is and why we are within it are questions whose answers will depend on the results of our gnoseological research.

The second remark is more positive and concerns the possibility of employing the same metaphor of the raft in order to explain to the Quinean opponent the value of the sceptical challenge and the corresponding gnoseological strategy. One of the tasks of a theory of knowledge can certainly be thought of as consisting in repairing the raft while it is sailing by using material, that is extension and criteria, which can only be found on the raft itself. But it should not be forgotten, on the other hand, that a theory of knowledge has also—but after what has been said up to here, one should say above all—the task of saying why we are sailing at all and how we arrived on such a raft. Persisting with the metaphor, what would happen to the project of repairing the ship if there is no way of arriving somewhere (the sceptical objection)? Or if we have been always near the beach (the hyper-realist objection)? Or if there is a splendid yacht close by and not in need of any repair (this would be the objection of those people who think that rational knowledge has good bases but does not have

any value compared to other types of knowledge, such as mystic, intuitive, telepathic, literary/metaphorical, and so on; how many ships are there we could jump into from our rational/scientific raft?)? Not only is Neurath's metaphor not incompatible with a philosophical gnoseology, it even asks for it.

By way of conclusion, I would say that the proposal for a naturalised gnoseology is not a promising alternative to the philosophical version supported in this work. When our Quinean opponent tries to answer the gnoseological questions on the basis of a cognitive science he lapses either into the naturalistic fallacy or into a *petitio principii*. When he tries to reject the value of the same questions he fails to recognise the crucial role of the sceptical investigation, its nature and the corresponding importance of a gnoseological strategy. In so far as our Quinean opponent is supporting a reinterpretation of the metaepistemological vicious circle, in terms of a positive interaction between extension and criteria of knowledge, we can agree with him. Thus, if Popper has reminded us of the importance of a study of knowledge that can sometimes ignore the individual knowing subject, Quine has helped us to stress the necessarily internal nature of any epistemological study, which can never reach a position external to the system of knowledges itself. But the fact that Ob.5 disregards, more or less on purpose, the fundamental importance of going beyond cognitive analysis by inquiring into the nature of the very process which brings the mind to entertain an epistemic relation with being, means that either it is an irreparable mistake or it calls for a radical revision of orientation.

CONCLUSION

THE CONSEQUENCES OF THE DISSOLUTION

THREE FUTURE TASKS

*“How wonderful, how very wonderful the operations of time,
and the changes of the human mind!”*

Fanny, in Jane Austin’s *Mansfield Park*

1. Three Future Tasks

In the foregoing pages I have carefully avoided grasping a number of questions confronting a gnoseology, which can now be gathered into three groups:

- what are the specific contents of a *theory of demand for knowledge*?
- what are the specific contents of a *theory of the feedback relation* between the demand for, and the *requisita* of knowledge?
- what are the specific contents of a *theory of the normative principles* by means of which the system of knowledges can be evaluated?

These three heads correspond to the three parts in which any gnoseology needs to be articulated, as a philosophy of the genesis of the system of knowledges, namely a theory of demand, of supply and of value. To the best of my knowledge, none of the previous questions has ever been addressed explicitly and the reader must have guessed that I shall not attempt to tackle them in this context either. It would have gone far beyond the remit of this study to elaborate a fully-fledged gnoseology which can deal with the interpretation of the genesis of knowledge in detail. My present aim has been to uncover the utility and feasibility of an indirect solution to the metaepistemological problem by means of a genetic approach, and this much I

hope I have been able to provide in terms of an interpretation of the demand for knowledge as a primary need and a regulative principle. If a gnoseology, as an apagogic theory of the genesis of the encyclopaedia, does represent a sound strategy that could be successful with respect to the problem of the foundation of an epistemology, then a second task, to be left to a future work, will be that of providing a comprehensive development of its contents and implications.

2. *A Metaphysical View*

Even if Sergeant was right about Locke, he too was eventually forced to endorse a form of dualism between things and notions, in order to solve the sceptical problem of knowledge. The substantial difference lay in the fact that Sergeant's was an *ontological* dualism. We have seen how the disappearance of "knowledges" in the modern epoch was a signal of ontological dualism's replacement with an *epistemological* one, internalised within the experiencing mind itself. Owing to its interpretation of knowledge as phenomenal, Kant's epistemology—as perhaps the last expression in the modern epoch of epistemology as *philosophia prima*—put, one may say almost forced, the dualism between the mental and the non-mental back onto that half-epistemological and half-metaphysical threshold that is the distinction between noumenal and phenomenal reality. Despite Kant's efforts, however, the metaphysical approach of Greek and Medieval philosophy, with its ontological, sceptic-proof dualism, has never been regained. The history of modern thought has rather been characterised by an increasing gap between mind and being. It is a process of epistemic detachment which has been unrestrainable ever since it began, and quite inevitably so. Knowledge develops as mind's answer to the presence of the non-mental. It is the means whereby the subject establishes the minimal distance from the object. Such a dualism, which is required by the mind to blossom, tends to remain stable as long as the body of knowledge can invariably be assimilated by a culture without ever being reified and felt to be alien. A stable tradition, with unbroken transmission, is capable of withstand-

ing many dramatic encounters with other epistemic views, by rejecting, repressing or absorbing them. But if there happens to emerge within a culture a considerable amount of knowledge which is extraneous to it and yet cannot be dispelled, if a tension is finally engendered between old and new knowledge, as was the case during the sixteenth and seventeenth centuries, then the encyclopaedia begins to acquire that fundamental feature of otherness which inevitably makes it require still further knowledge to be interpreted and reappropriated in an endless, escalating process of action and reaction. There is no knowledge in the identity between subject and object, but even the presence of some knowledge is not sufficient to guarantee its growth, unless the subject perceives knowledge itself as part of the external world, and begins to deal with it and react to it, treating it as just another object of knowledge. Only then is the threshold of stability overcome, the self-reflective movement begins and knowledge can only expand ever faster, as its growth increases the momentum of the very reaction which brings it about.

The rise of dualism and the escalating interaction between traditional knowledge as an object and innovative knowledge as a further reaction to it has led to the emergence of a new world. Today the encyclopaedia is an artificial universe which is, to an ever-increasing degree, the very environment we inhabit, and whose challenges we must answer. It is a domain as completely autonomous from each of us, as individual minds, as the physical world is, and which, unlike the latter, is capable of an infinite growth in extension and complexity. What is our relation with such an epistemic reality?

On the one hand, our situation is somewhat similar to that in which Sergeant thought himself as regarded the material world: a relation of potentially full understanding of something which bears the stamp of total intelligibility. As a late scholastic philosopher, Sergeant looked at the physical universe as a fully understandable domain, created by a benevolent, omnipotent, omniscient and, above all, rational God. Of course, it still possessed ultimate secrets, as not everything was considered to be knowable, but it was not affected by an intrinsic dichotomy between thought and reality: whatever was

supposed to be knowable was also expected to be fully so. As I have tried to explain, it is only an apparent paradox that several centuries of constant growth of knowledge should have made us lose such closeness to the world of things, while providing another type of reality, an entire universe of codified knowledges, which enfolds being, and intentionally keeps it at distance from the mind. Such a world of knowledges has been created by the human mind, and since we are totally responsible for its existence, we may also be confident of its potential, full intelligibility. Perhaps this is part of what Vico¹ saw when he declared the epistemological superiority of the historical disciplines: they represent the efforts of the mind to interpret its own creation, and as such they may have more chance of succeeding than the empirical disciplines, which deal with a reality so thoroughly alien to the mind.

On the other hand, we have seen how, in the process of studying the world of knowledges, the mind investigates its own product and hence is bound to be confronted with the inevitable dilemma represented by a self-referential assessment. A radical reflection upon the reasons that prompt and sustain the incessant construction of the world of knowledge is badly needed, but no innovative theory capable of explaining and vindicating the phenomenon of the encyclopaedia can ever be based merely on the still dominant, but yet too naive, assumption of a human desire for knowledge for its own sake. A more negative anthropology is required, in order to make possible a gnoseology as an ontology of knowledge.

The dualism between mind and being; the self-reflective nature of knowledge; the emergence of the encyclopaedia as the real habitat of mental life; these are among the most innovative matters confronting

¹ Cf. R. Manson, *The Theory of Knowledge of G. B. Vico* (Hamden, Conn.: Archon Books, 1969) and G. Tagliacozzo (ed.), *Vico: Past and Present* (Atlantic Highlands, N. J.: Humanities Press, 1981), especially the articles by R. Crease "Vico and the 'Cogito'" (pp.171-181), N. Bhattacharya "Knowledge 'per causas': Vico's Theory of Natural Sciences" (pp.182-197) and A. Faj "The Unorthodox Logic of Scientific Discovery in Vico" (pp.198-205).

our philosophical reflection today. They are not entirely new, for at least since the Renaissance the mind has constantly moved away from being, intentionally constructing and refining its own cultural environment as an alternative to the world of nature. These issues are also far from having reached their ultimate development, and this is what makes their understanding a pressing issue. They have certainly become more and more clearly discernible just in our century. It is with respect to such new features of our knowledge and culture that Greek intellectualism becomes utterly inadequate and a new theory of the genesis of the epistemic relation between mind and being is required.

Davidson once wrote that “it is nice to know that we won’t be short of work”. If I can deliberately misunderstand the joke, I am not sure I share his view. For it seems to me that intellectual labour is a painful experience, undertaken by the mind as rarely as possible and essentially only in reply to the pressure exercised by reality. This is probably why I wish I could now refer the reader to a book that has already been published, instead of committing myself to write another one on the desire to know.²

² For an initial attempt to develop a gnoseology see my *The Search for Knowledge: from Desire to Defence*, PhD. thesis, University of Warwick, 1991 and “Scepticism and the Search for Knowledge: a Peirceish Answer to a Kantian Doubt”, *Transactions of the C. S. Peirce Society* 30 (1994), pp. 543-573.

APPENDIX

DEFINITIONS, FORMULATIONS AND QUESTIONS

*A Logic in which the answers are attended to
and the questions neglected is a false logic.*

R. G. Collingwood, *An Autobiography*

I thought it would be useful to provide the reader with a separate list, ordered alphanumerically, of the various definitions, formulations and questions to be encountered in the text.

D₁) process of knowing =_{def.} *P-knowing* =_{def.} ($\Re$ (S,O))

D₂) *knowledges* =_{def.} whatever is known in the sense of

- i) things known, regardless of whether they are known by a specific subject or not, i.e. *res cognita* or simply items of knowledge that can be introduced by the clause “it is known that ...”
- ii) individual cognitions, that is formulated items of individual knowledge that can be introduced by the clause “[name/pronoun] know[s] that ...”
- iii) sciences, that is consistent bodies of (i) and/or of (ii)
- iv) any (finite/infinite) disjunction of (i)/(iii)

D₃) instances of (possibly) objective, formulated knowledge =_{def.} *knowledges*

D₄) the outcome of the process of knowing =_{def.} knowledge as a result
=_{def.} *knowledges*

D₅) *knowledges* concerning a topic different from *knowledges* =_{def.}

expressions of knowledges =_{def.} *K-expressions*

D₅*) K-expressions =_{def.} possibly impure knowledges concerning topics different from objective knowledge itself

D₆) knowledges concerning knowledges =_{def.} studies of knowledges =_{def.} *K-studies*

D₆*) K-studies =_{def.} possibly impure knowledges concerning objective knowledge itself

D₇) K-expressions or K-studies depending on S =_{def.} K-expressions or K-studies in themselves

D₈) the domain on which x will range =_{def.} the set containing all the instances of what is liable to be known, excluding the nature of objective knowledge itself =_{def.} D_k

D₉) the process followed by a knower in the formulation or acquisition of some knowledges =_{def.} *cognitive processes*

D₁₀) the process whereby it is possible to produce further, new knowledges on the basis of some already established knowledges =_{def.} *the growing-process of knowledges*

D₁₁) the genetic process whereby a relation of knowing comes to be established, and hence P-knowing produces knowledges =_{def.} *the genesis of P-knowing*;

D₁₂) any K-study belonging to Σ_4 and different from epistemology =_{def.} *cognitive science*

D₁₃) *epistemology* =_{def.} the K-study belonging to Σ_4 which consists of impure, public instances in themselves of logical analysis of (i) the nature of knowledges and of (ii) its genesis according to G₁/G₃, by

means of logical models

D₁₄) beliefs, judgements, statements and propositions =_{def.} (dispositional) linguistico-doxastic phenomena P

D₁₅) a P which may assert something about the nature, i.e. the properties and the existence, of external reality W (i.e. persons, things, events, facts etc.) even if only elliptically =_{def.} potential knowledge-bearer (kb)

D₁₆) a kb that enjoys an epistemic relation (R_e) with W such that it conveys true information about W =_{def.} a knowledge (K)

D₁₇) a P aspiring to the status of K =_{def.} ?p^k

F₁) the process of knowing, as an epistemic relation ($\mathfrak{R}$) between Subject (S) and Object (O), produces a certain output called knowledge (K)

F₂) ($\mathfrak{R}$ (S,O)) produces K

F₃) ($\mathfrak{R}$ (S,O)) produces the class of knowledges

F*₃) Σ_3 is the class of all K-expressions which (are supposed to) consist of possibly impure, public instances in themselves of a certain kind of objective knowledge, concerning some particular knowable topic different from objective knowledge itself.

F*₃*) Σ_3 is the class of all K-expressions which consist of possibly impure, public instances in themselves of a certain kind of objective knowledge of/about x, for x ranging over D_k .

F*₁*) Σ_1 is the class of all K-expressions which consist of possibly impure, subjective instances of a certain kind of objective knowledge of/about x, for x ranging over D_k .

F*₄) Σ_4 is the class of all K-studies which consist of possibly impure, public instances in themselves of a certain kind of objective knowledge about knowledges, as these are obtained by the interpretations of F*₁* and/or F*₃*.

F*₄*) Σ_4 is the class of all K-studies which consist of possibly impure, public instances in themselves of a certain kind of objective knowledge of/about:

- a) knowledges obtained by the interpretations of F*₁* and/or F*₃*;
and/or
- b) the genesis of knowledges according to G₁ G₂ and G₃.

G₁) the genetic process that leads to the institution of P-knowing—i.e. the kind of genetic relation (R_g) between a human being (HB, not yet a human knowing subject) and a knowable object (R_g (HB, O)), or to be more abstract and general, between mind and being—which is responsible for

- a) the occurrence of the P-knowing (i.e. ($\mathcal{R}$ (S, O))); hence for
- b) the activation of the highest functions of the cognitive processes;
and therefore for
- c) the genetic relation between P-knowing and knowledges (R_g (P-knowing, Ks));

G₂) the genetic relation that links the cognitive processes of a knower S to the production of S' knowledges; and

G₃) the genetic relation between logical methods, initial knowledges as input and new knowledges as output.

S*) T states something about K and it does so without taking into account any empirical information concerning K. T approaches K a priori

W*) K has the *property* of being knowable a priori

Σ = the encyclopaedia

Σ_1 = the subclass of the encyclopaedia consisting of all the subjective K-expressions

Σ_2 = the subclass of the encyclopaedia consisting of all the subjective K-studies

Σ_3 = the subclass of the encyclopaedia consisting of all the public K-expressions

Σ_4 = the subclass of the encyclopaedia consisting of all the public K-studies

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